

# PM Breakout Session Alternative Fuels

Phase 2 and Beyond

# Setup for the afternoon breakout session

- Imagine it's the year 2022, and you are being interviewed by a *New York Times* reporter
- You created a program that succeeded in accelerating the adoption of alternative fuels in the U.S.
- Tell us about what you did
  - ▶ What concept(s) did you employ?
  - ▶ What were the benefits to the consumer?
  - ▶ How did you scale up the size of the program?
  - ▶ What barriers did you overcome?

# Outline

**Discussion summary: session F1**

Discussion summary: session F2

## The concept & alternatives considered

- Rewards program for using alternative fuels.
- Use of a rewards card/smart phone to purchase fuel which would record data, and could provide personal recommendations based on current conditions and previous behavior.
- Have community buy-in
- Push information to consumers about options, targeted messaging.
- Mandates for the development of flex-fuel vehicles.

## What were the key features and benefits?

- Program allow flexibility, simple, allows consumers to try different option. Takes into consideration geography, lifestyle. Has a default option that can be over ridden.
- Allow the recording of fuel usage for CAFE purposes and reward consumers
- Car based sensor to record fuels consumed in the car over the life of the car that's tied into the reward program. The default setting is for the sensor would be on but the consumer would need to sign up for the rewards program.

# What were the key hurdles that you overcame?

- Why did consumers want to sign up for the cards.  
Declared a national crisis to encourage adoption.
- Identifying the key metric to target the different demographic groups around the country.

# Outline

Discussion summary: session F1

**Discussion summary: session F2**

# The concept & alternatives considered

- 10 yrs is too short of a period of time for complete transformation (considering fleet turnover for example); its not done, but we are well on our way to commercial viability of new transportation paradigms
- Assume that technology and behaviors drive cost down (ex. Batteries \$100/Kwhr)
- Policies are in place (ex. CAFÉ standards, RFS)
- Segmentation:
  - ▶ High Density Urban: Folks gave up the idea of ownership
  - ▶ Ex/suburbs and/or Low Density: Still need to own a vehicle, but seeks fuel flexibility (move to EV), & vehicles are more efficient 50-100 mpg
  - ▶ Long haul: Transport and long trips
- Shift towards all vehicle transportation perception being “Public” in the sense that all autonomous transport has a societal impact



# How did the concept achieve its goal?

- High Density Urbanites:
  - ▶ Highly efficient ICEs, and EVs, but, less model diversity
  - ▶ Pilot studies for car sharing; IT role out and optimization to manage efficient payments (ex. Direct payments via smart phones)
  - ▶ Significantly broadened opportunities for familiarizing new models (ex. “EV experience” and car sharing programs)
  - ▶ Shift towards buying for “mobility” for high density urbanites
- Ex/Suburbs and/or Low Density:
  - ▶ Optimization of fuel choices and delivery.
  - ▶ Simplification of potentially more complex fuel choices.

## What were the key features and benefits?

- Information technology and integration of vehicle and fuel use with utilities and retailers (Ex. Social feedback improves use of green fuels in low MPG vehicles)
- Establishment of social norms regarding energy use in transportation (Ex. “Smokers used to own the air...now the people who don’t smoke own the air”)
- Perceptions about the societal impacts of transportation do change (Ex. Generational shifts; social media)
- Change of perceptions involving car ownership, based on data driven models
- Use of and observation of alternative fuel use is championed with positive feedback mechanisms
- Flexibility to purchase “green” electricity (Ex. Could be bundled with the purchase price)
- Deployment of required infrastructure enabled by individual shareholder purchases of the infrastructure directly (Ex. Co-op model for infrastructure development)

# What were the key hurdles that you overcame?

- How do you pay for energy?
- Communication and labeling that draws attention to positive/desired behaviors
- Bringing the future closer present
- Policy uncertainties