

# **Creating a Win-Win-Win with the Next Generation of Fuels and Vehicles: *Consumers and Retailers***

John Eichberger

Executive Director, Fuels Institute

[jeichberger@fuelsinstitute.org](mailto:jeichberger@fuelsinstitute.org)

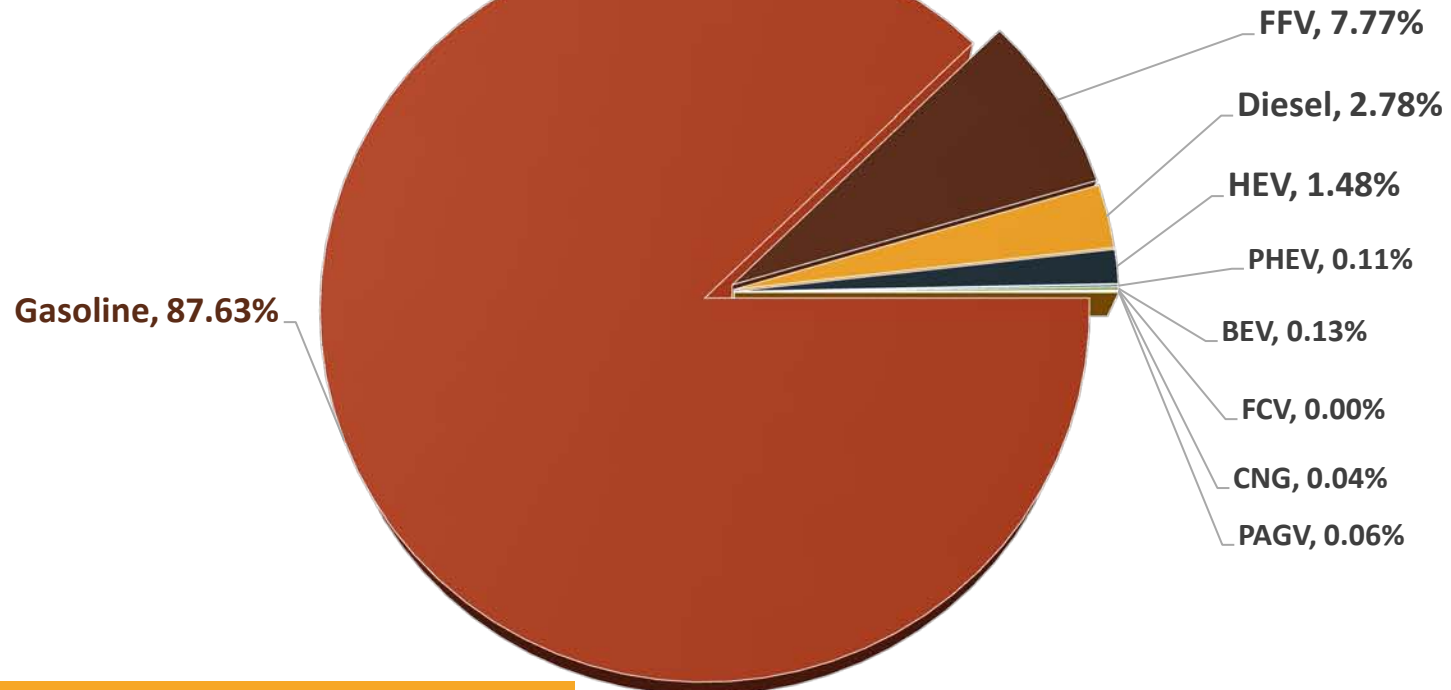


@eichbergerjohn

@fuelsinstitute

# Where are we starting?

**U.S. Registered LDVs 2016**



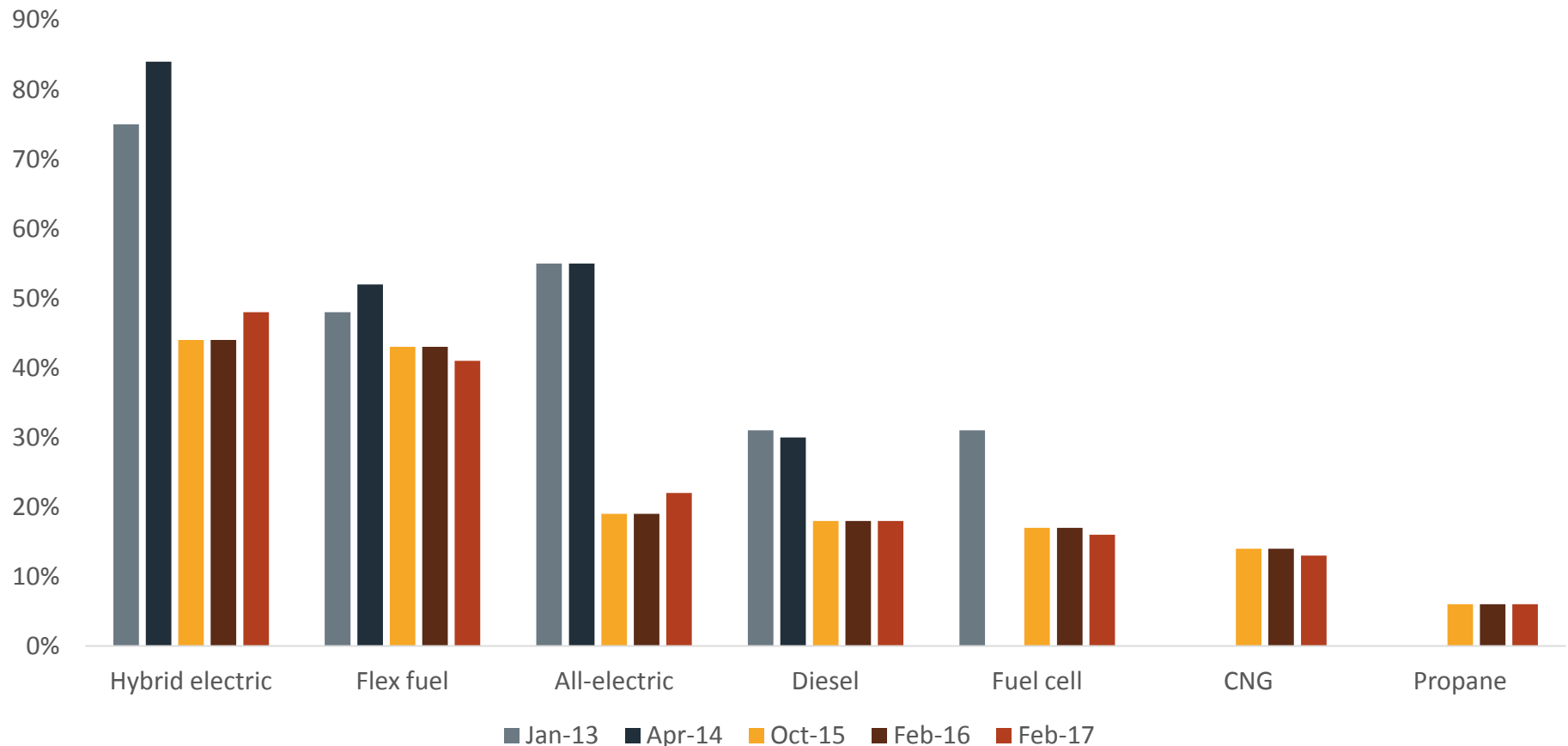
**99.66% of LDVs = Liquid Fueled**

# How do you change the market?



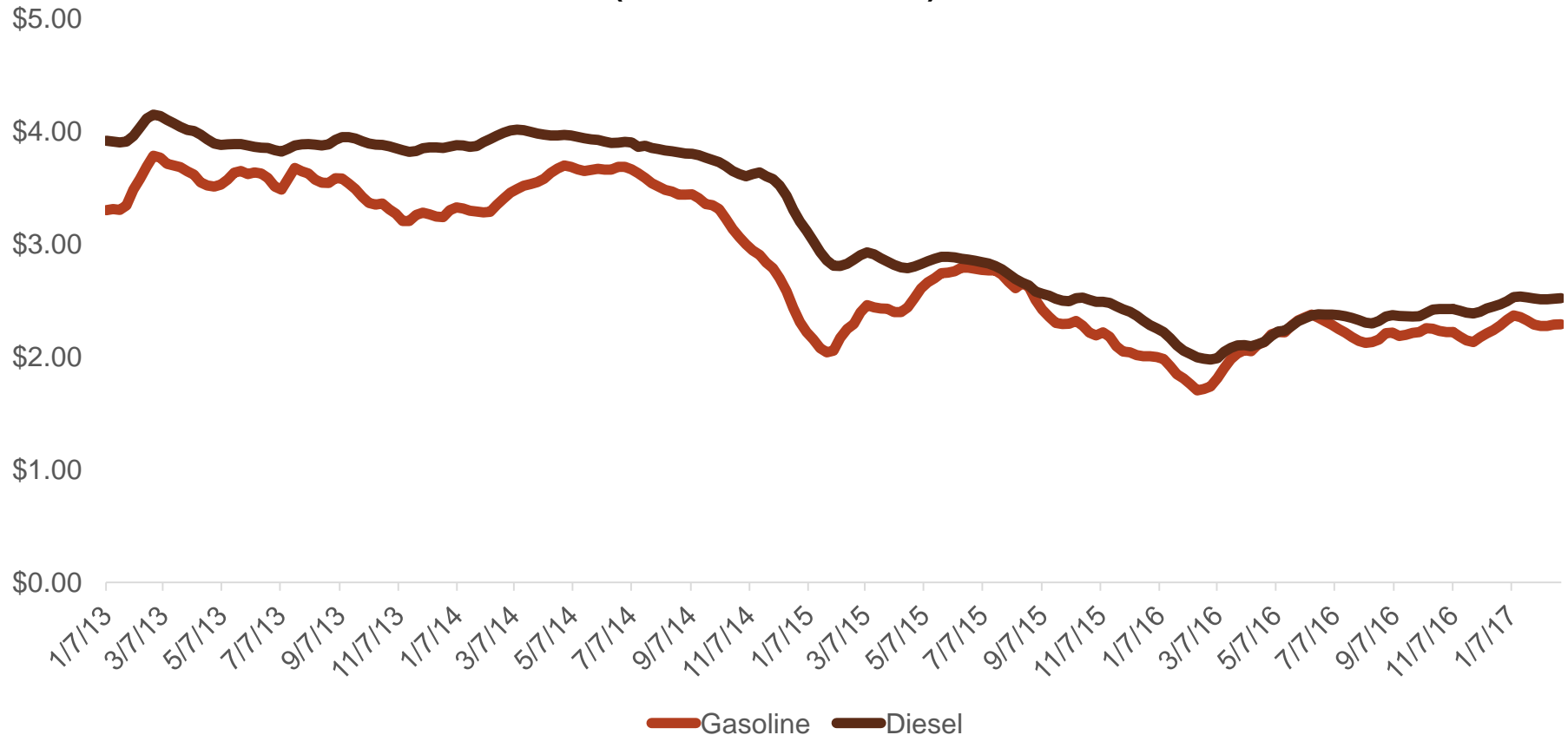
# Consumer interest in alternatives has waned in recent years

Would you consider the following types of vehicles?



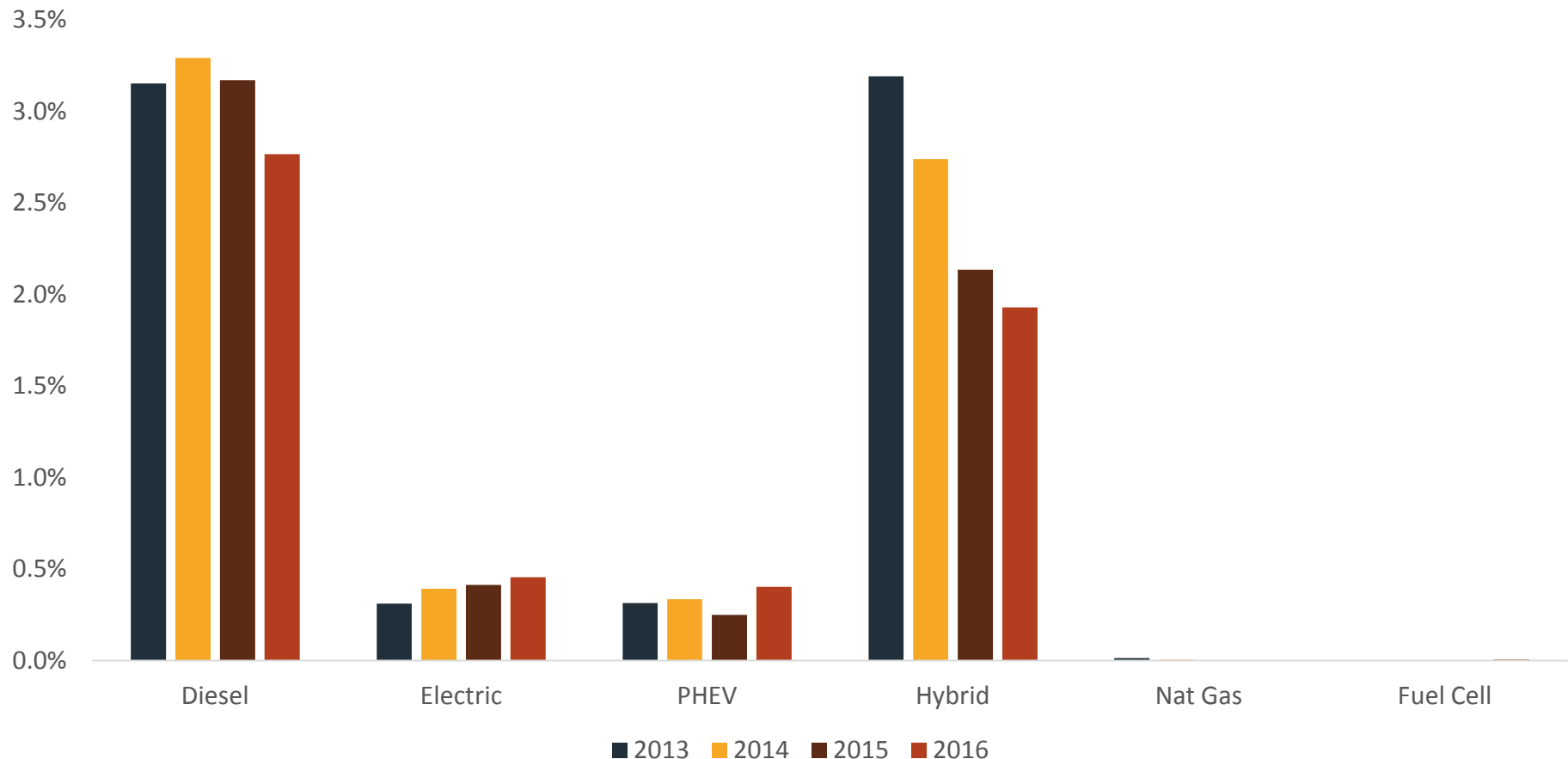
# Most likely because of low fuel prices

**Retail Fuel Prices**  
(Jan 2013 - Feb 2017)

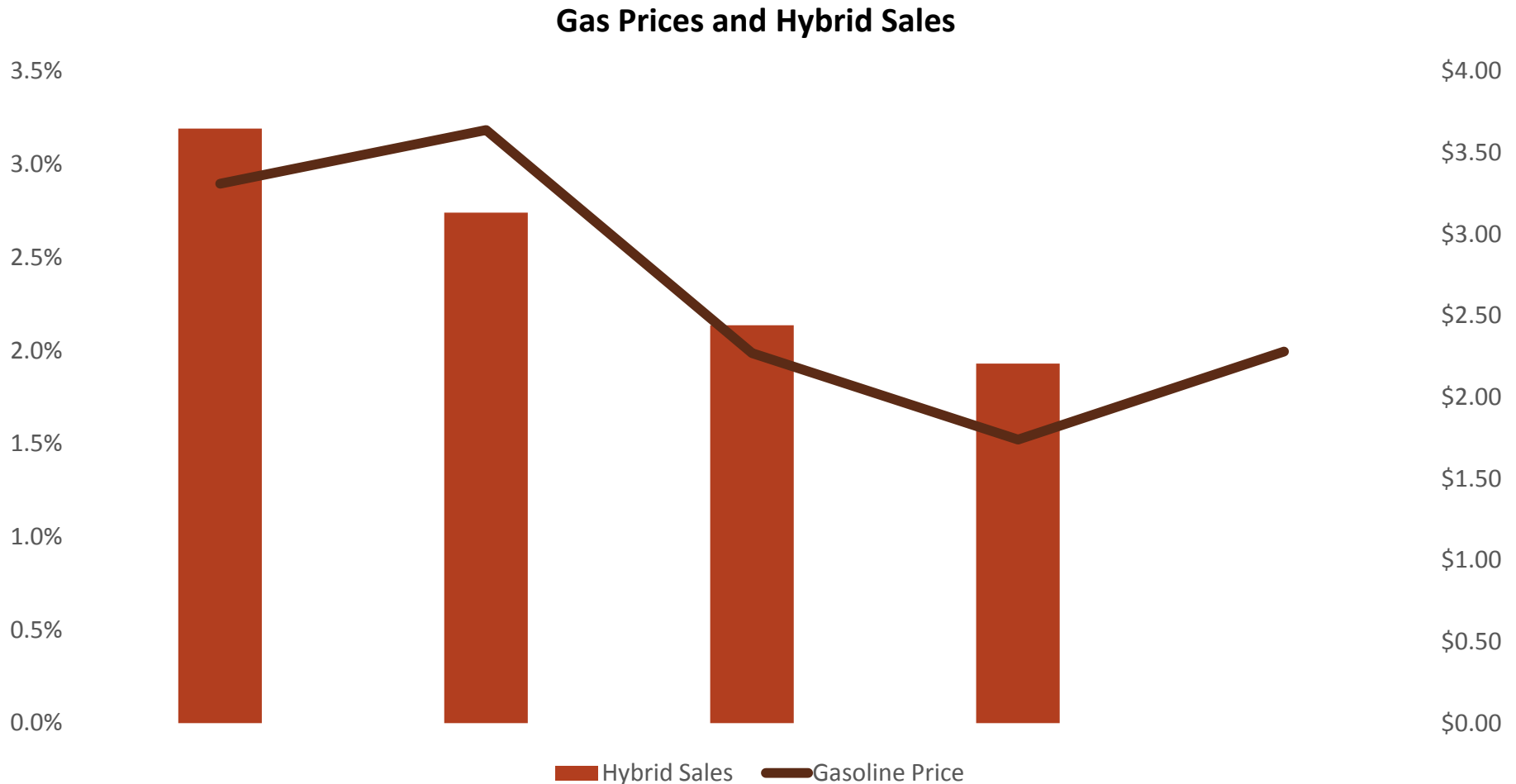


# Attitudes reflected at dealer lots

Market Share of LDV Sales 2013-2016



# Have hybrids failed?





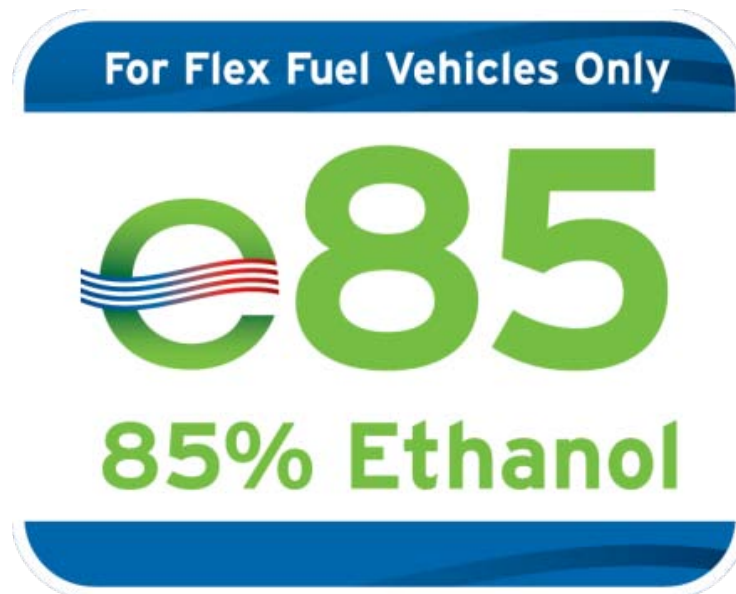
# Retail Economics = Hurdle

- 123,807 convenience stores selling liquid fuel
- Average 2015 pre-tax profit per c-store = \$28,000
- Equipment costs:
  - Tank systems = >\$100,000
  - Dispensers = \$15,000 - \$25,000
- Demand has to exist to justify investment





# Market Experience



# How do we evaluate options?



# **What about high octane fuel?**

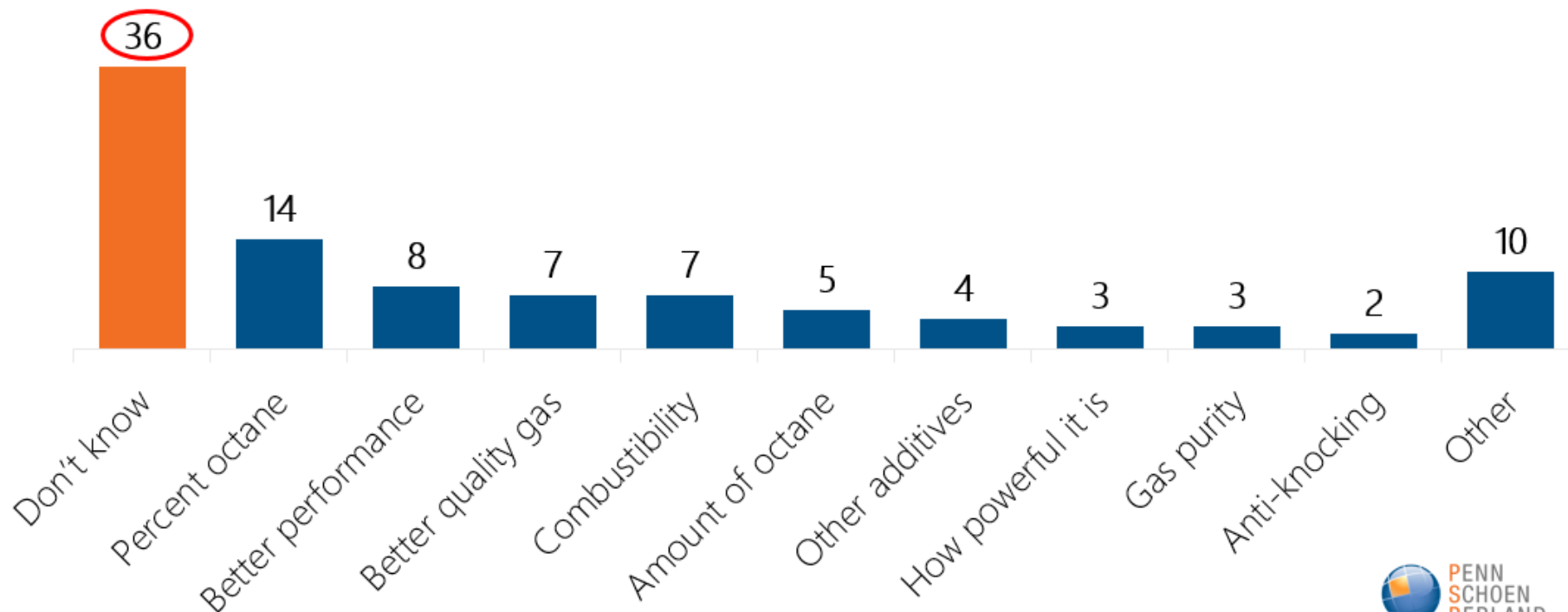
- What is the composition of the fuel?
- What is production feasibility and cost?
- Is it compatible with infrastructure?
- Is it compatible with legacy fleet?
- Will vehicles tolerate lower octane fuels?
- What are regulatory requirements?
- Can it be competitively priced?
- How will consumers react?

# Consumer Confusion?



# More than one in three consumers don't know at all what an octane grade means for gasoline or for their cars

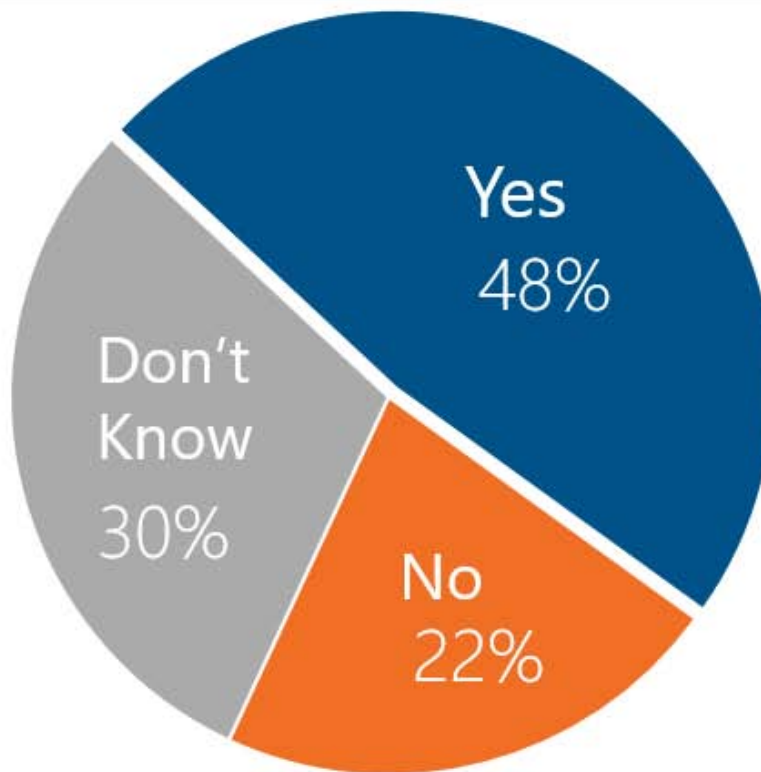
To the best of your knowledge, what is an "octane grade" as it relates to gasoline?  
(Coded open-ends, Split Sample A)





# Only about half of fuel consumers know if their car has a recommended octane grade

Do you know if there is a recommended octane grade for the vehicle you most commonly drive? *Showing % All*



## Gender

- 62% of Men
- 33% of Women

## Age

- 35% of 18-34
- 45% of 35-49
- 58% of 50+

**JUST DO IT.**

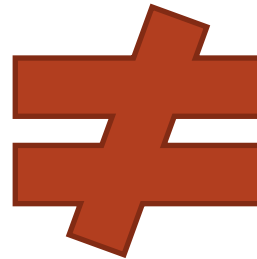


# Beware aggressive predictions



- Autonomous, EV ridesharing services will be 10x cheaper than personally owned vehicles
- The economics will drive rapid, disruptive consumer adoption
- Within 10 years of AV approval, 95% of US VMT will be via new AV, EV ridesharing services – est. 2030
- Oil will drop to low \$20's per barrel
- OEMs, dealerships, gas stations, etc. will all disappear

# Advocates point to smartphones



# Market Changes Slowly

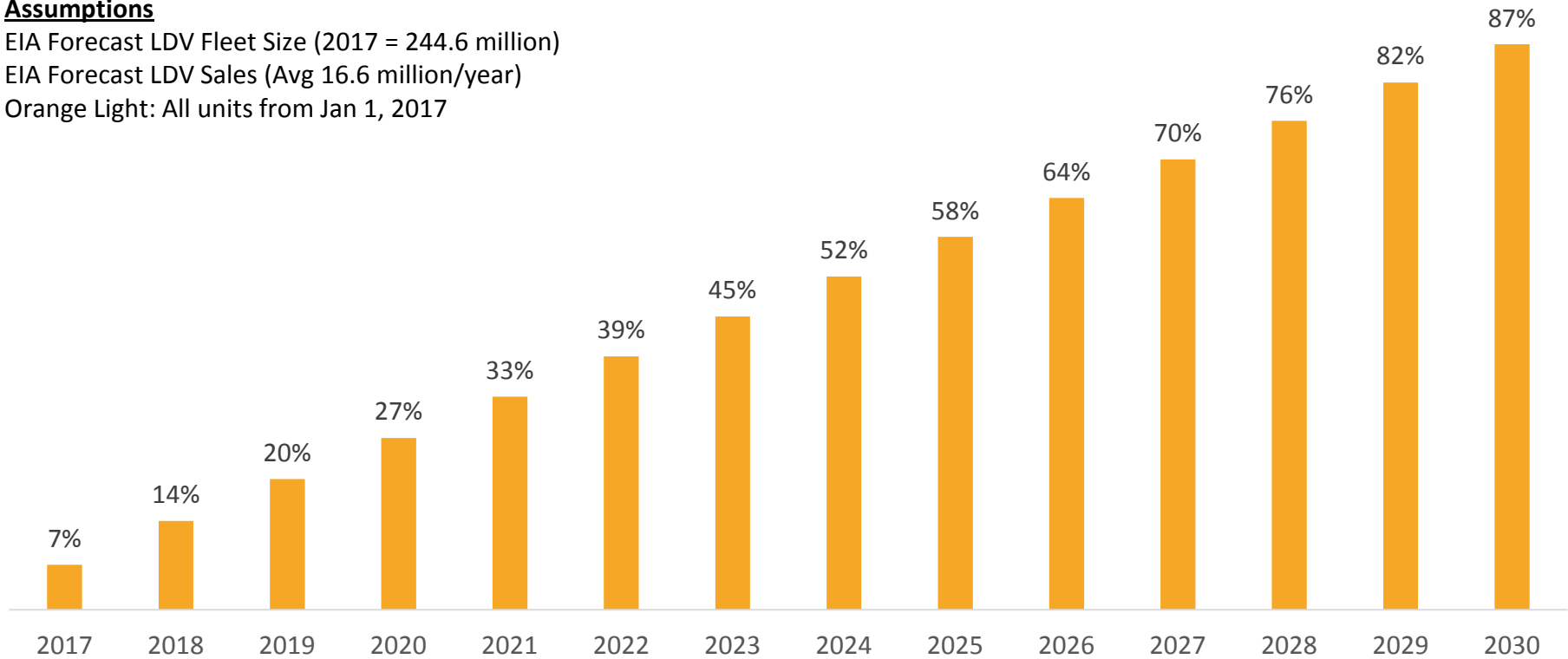
## Blinking Orange Light Share of Registered Vehicles

### Assumptions

EIA Forecast LDV Fleet Size (2017 = 244.6 million)

EIA Forecast LDV Sales (Avg 16.6 million/year)

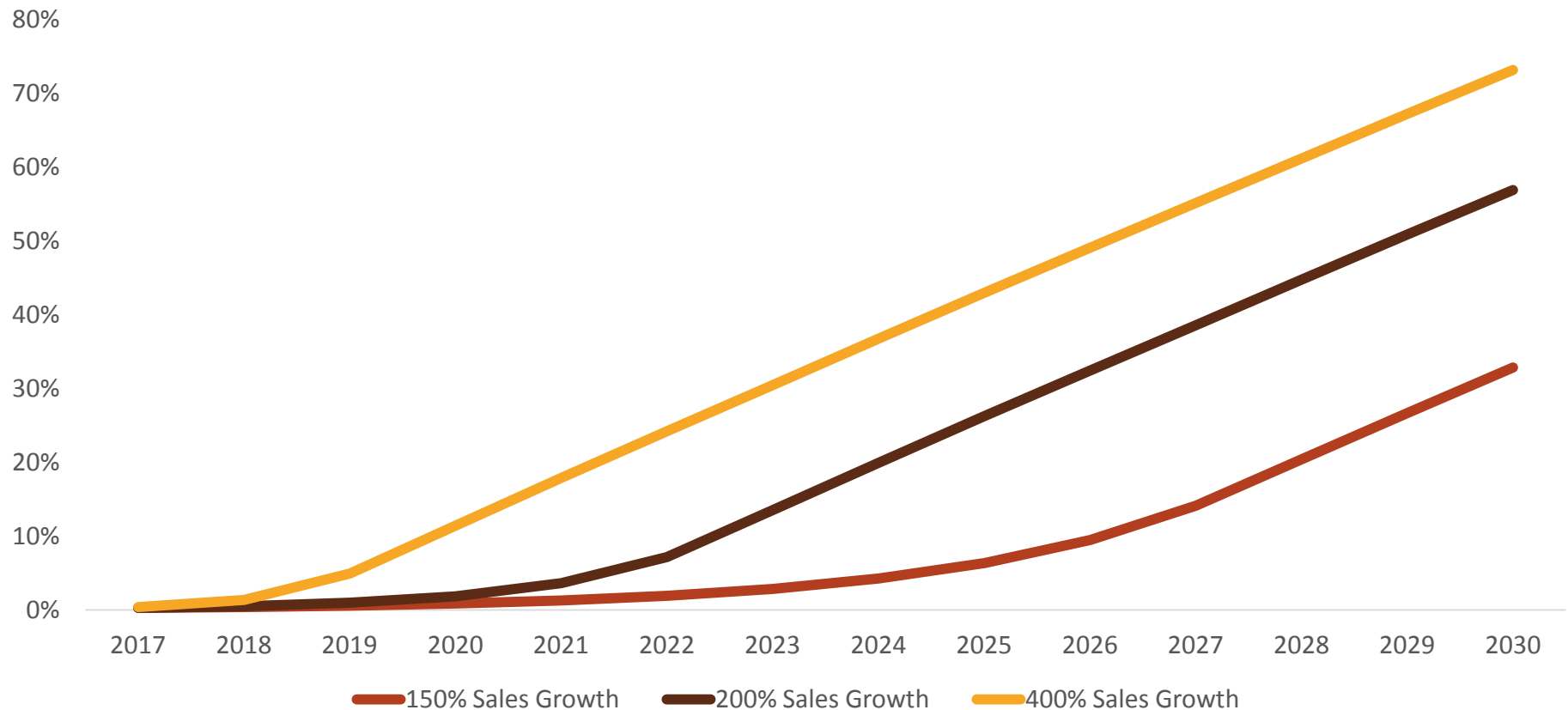
Orange Light: All units from Jan 1, 2017





# Even super growth is slow

PHEV/BEV Share of Registered LDVs



# Observations

- Consumers resist change – cost, familiarity, convenience, etc.
- Consumers must be educated, but don't want to learn
- Retailers need demand to invest – fuel will follow vehicles
- Auto industry needs fuel availability to deliver vehicles – fuel must precede vehicles
- Solutions that benefit one sector will fail – it is an interconnected, co-dependent market
- The market changes slowly, even with strong growth
- Disruptive change is possible, but this is not the smartphone market – even disruption will take a very long time
- Cross-industry collaboration is critical to new product success

# Questions.

John Eichberger  
Executive Director, Fuels Institute

[jeichberger@fuelsinstitute.org](mailto:jeichberger@fuelsinstitute.org)



@eichbergerjohn

@fuelsinstitute