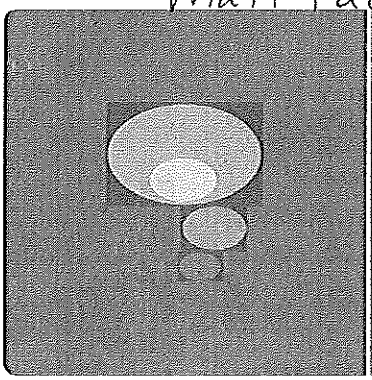
Docket No. 13-057-02
Hearing held on August 7, 2013
Exhibit to Presentation given by
Matt Pacenza for HEAL Utah



Alternative Fuel Vehicles in Utah

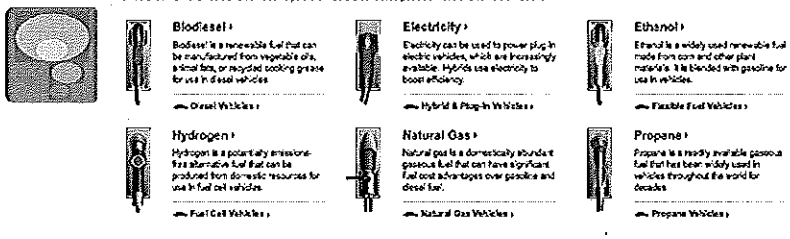
Opportunities within Rule R307-327

HEAL UTAH

Statutory language

- "explore and develop options and opportunities for advancing and promoting measures designed to result in cleaner air in the state through the enhanced use of **alternative fuel vehicles.**"
- **alternative fuel vehicles**, according to federal government, has a very clear meaning:

What are Alternative Fuel Vehicles?

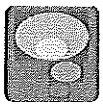


Source: http://www.afdc.energy.gov/fuels/

Buses: Best Air Quality Investment?

- Terrific report: "Clean Diesel versus CNG Buses: Cost, Air Quality, & Climate Impacts," by MJ Bradley for Clean Air Task Force
- Emissions calculations for buses and other large vehicles have changed dramatically, since new diesel rules went into effect
- Sharply cut sulfur content in fuel, from 500 ppm to 15 ppm
- Required new controls in vehicles to take advantage of low sulfur fuel
- Result is Clean Diesel buses emit "94% less NOx per mile, 98% less PM, and 89% less HC" than aging diesels

Clean Diesel vs. CNG Buses



- Emissions profiles are similar. Diesel better on NOx, CNGs better on PM and HC
- CNGs slightly better on climate gases.
- Diesels much cheaper to buy (**$70,000 less)** than CNGs
- Diesels don't require costly fueling infrastructure
- However, CNG has much cheaper fueling costs
- Choice between two depends upon priorities, upon funding streams.
- What is clear: **Replacing as many older buses as possible should be goal.**

Buses Conclusion

- *"For every $10 million of capital funding, a transit agency could purchase approximately 26 new diesel buses or 21 new CNG buses (and associated fueling infrastructure), and retire an equivalent number of old buses. Given that a greater number of older, high emitting buses could be retired, fleet-wide emission reductions of NOx, PM, and HC per dollar of capital funding could be 47%, 23%, and 11% higher, respectively, if new diesel buses are purchased than if new CNG buses are purchased."*

Consumer Vehicles

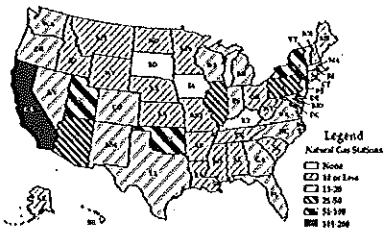
- CNGs vs. EVs
- EVs are cleaner, much so if localized pollution is principle concern
- Much less fueling infrastructure needed
  - Overnight charges at home w/no need to add anything
  - Rapid charging stations, vs. CNG, are roughly 1/20th the cost.

Vehicle Popularity

- New CNGs have failed to take hold in consumer market, after years available
- 20,381 of the 14.5 million cars and trucks sold last year run on CNG.
- EVs averaging about 7,000 a month in 2013 – projected to get close to 100,000 by end of year
- So-called "range anxiety" fading for consumers

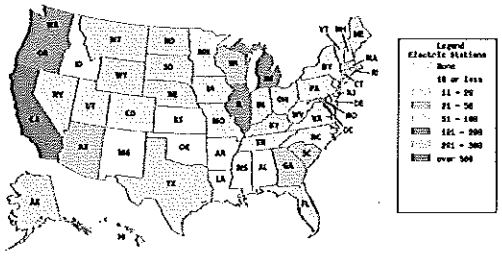
Utah support for CNGs vs. EVs

- Even prior to SB275, Utah had one of most developed CNG fueling infrastructures in nation



Utah support for EVs

- Skewed rebate policy: $2,500 for CNGs vs. $605 for EVs. Doesn't apply to leases.
- EV charging lags



Conclusion

- Especially in consumer market, alternative fuel vehicles which aren't CNGs are likely smarter air-quality investment bet
- Even in fleet vehicles, Clean Diesel and EVs should be studied
- Utah already done much to support CNGs – time now to do same for others, and let market decide.

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HEAL UTAH FIGHTING ACTION TO PROTECT UTAH