



Status of NGV Market in California

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NGVs in California Today

- 17 years developing current market
- 30,000+ vehicles on road today
 - 6,000+ HD and 24,000 LD
- Focus on high fuel use fleet markets (transit, refuse trucks, pickup and delivery, taxis, shuttle fleets)
- Focus for NGVs has always been low emissions



Emissions

- HD engines CARB certified to 0.2*-1.2 gram NOX
- Have met 2007 PM standards since 2003
- 2007 HD engines will be certified to 2010 standards
- LD vehicles (e.g. Honda GX) certified to SULEV
- NGVs deliver 20% reduction in GHGs **NOW!!**
- **Natural gas the ultimate low carbon fuel**



NGVs in California Today

- Over 450 natural gas fuel stations in California
 - 160+ Stations are public access
 - Accept major credit cards to fuel
- 2005 introduced a home fueling appliance where cars can be fueled at home
 - Home fueling tariff = \$1.25 per gallon
- NGV business model – build infrastructure and market simultaneous
- *Creates economically viable market now!!*



Market Penetration Today

- Petroleum fuel displacement growing at 25-33% per year since 1994
- 2005 displaced 100 million gallons of petroleum (CNG and LNG)
- Federal incentives for vehicle purchases, infrastructure, fuel



Natural Gas Future for Calif.

- Economically viable now
- Potential for 1-2 million vehicles
- Potential to displace 1-2 billion gallons of petroleum



Federal Tax Credit Incentives

| Vehicle Weight | Max Diff. | Max Incentive |
|------------------|-----------|---------------|
| >26,000 | \$40,000 | \$32,000 |
| 14,000 to 26,000 | \$25,000 | \$20,000 |
| 8,500 to 14,000 | \$10,000 | \$8,000 |
| <8,500 | \$5,000 | \$4,000 |

Note: Federal tax credits belong to customer. Where customer is a tax exempt entity, tax credit can be given to seller of vehicle – and customer can negotiate price discount for vehicles.





California Natural Gas Vehicle Coalition



Example of Industry Delivered Fuel Price (excluding federal fuel tax credit)

| | <u>\$/Gallon</u> |
|-----------------------------|------------------|
| Commodity @ 7.462 per mcf | 0.93 * |
| Local Transportation | 0.10 |
| O&M (electricity) | 0.35 |
| Taxes | 0.14 |
| Capital Recovery and Profit | 0.40 |



Total: **1.92 GGE**
2.11 DEG

* SoCalGas gas prices for Jan 2007



Fuel Tax Credit

- Beginning October 2006 – 3 years
- Tax credit to fuel provider
- Fuel Tax Credit
 - \$0.50/GGE CNG \Rightarrow \$0.56/DEG
 - \$0.50/gallon for LNG \Rightarrow \$0.85/DEG
- Refunded quarterly
- Given recognized need for petroleum diversity – high likelihood of extending



Natural Gas Link to Renewables

- Potential NG from landfills – 7 million gallons per day
- NG from biogas sources – 1 million gallons per day
- LNG manufactured from stranded wells – 1 million gallons per day



Natural Gas Path to Hydrogen

- NG likely feedstock for H₂
- H₂ can be made onsite at NG fuel stations and service both NG and H₂ vehicles
- Customer acceptance and familiarity with high pressure gaseous fuels
- NG/H₂ blends to further reduce emissions



Contact Information



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