

Natural Gas Vehicles: An American Energy, Economic, and Environmental Answer



Woodford Summit
March 29th, 2011



NATURAL GAS: FUELING AMERICA'S FUTURE



No Lead 309.9

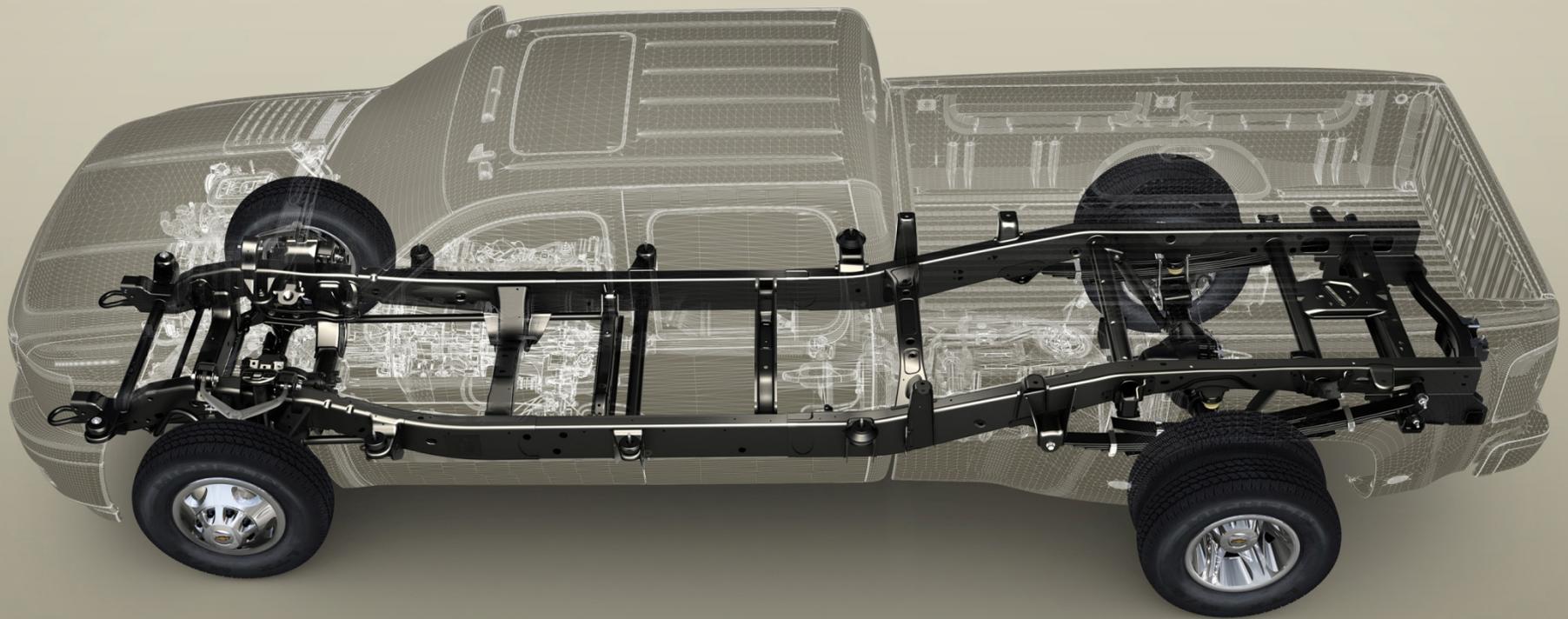
COMPRESSED NATURAL GAS 139.9

SUBWAY

WE NOW
HAVE CNG

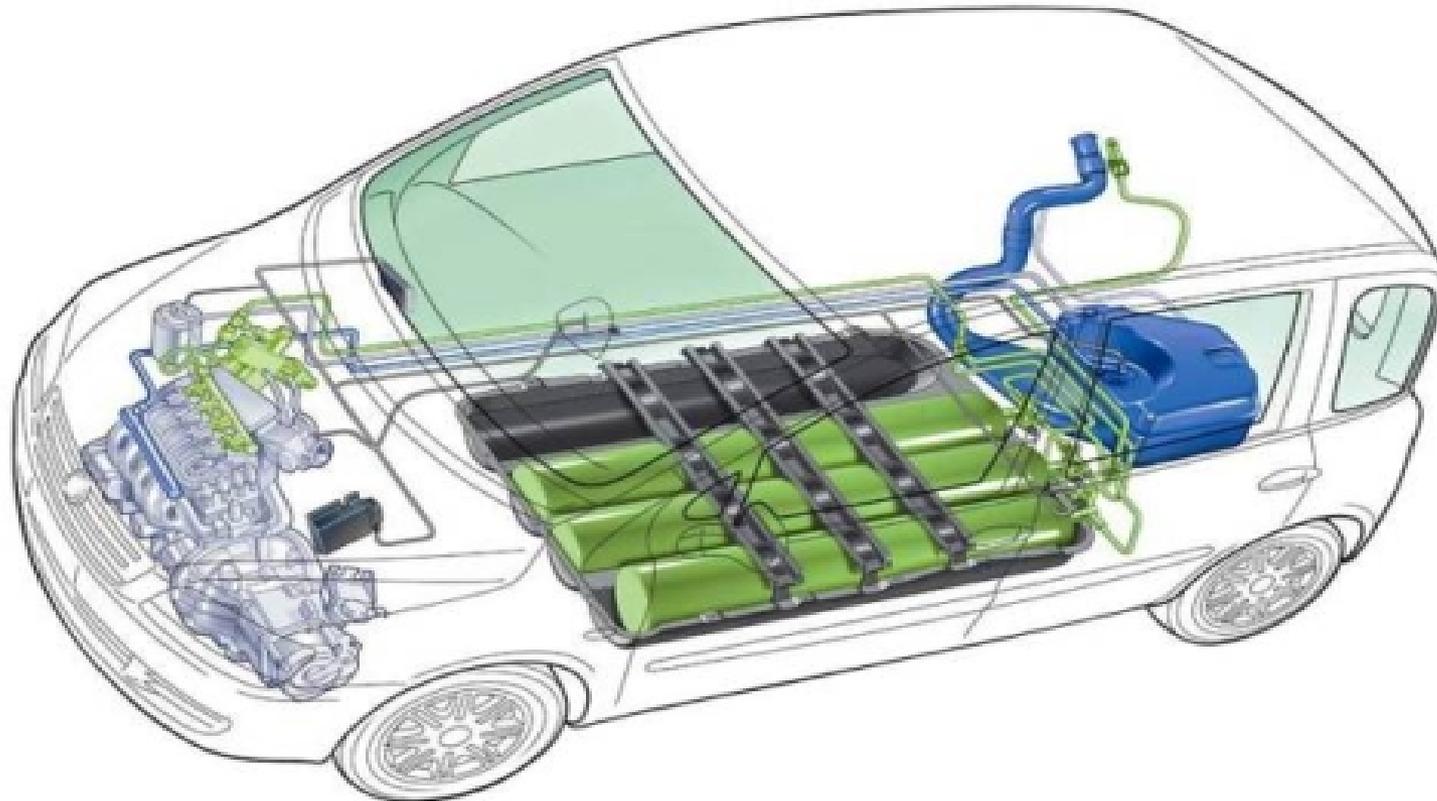
DIESEL
335.9

2011 MY Silverado/Sierra HD





Fiat - Panda



Oklahoma's Comparative Natural Advantage: A "Natural Gas State"

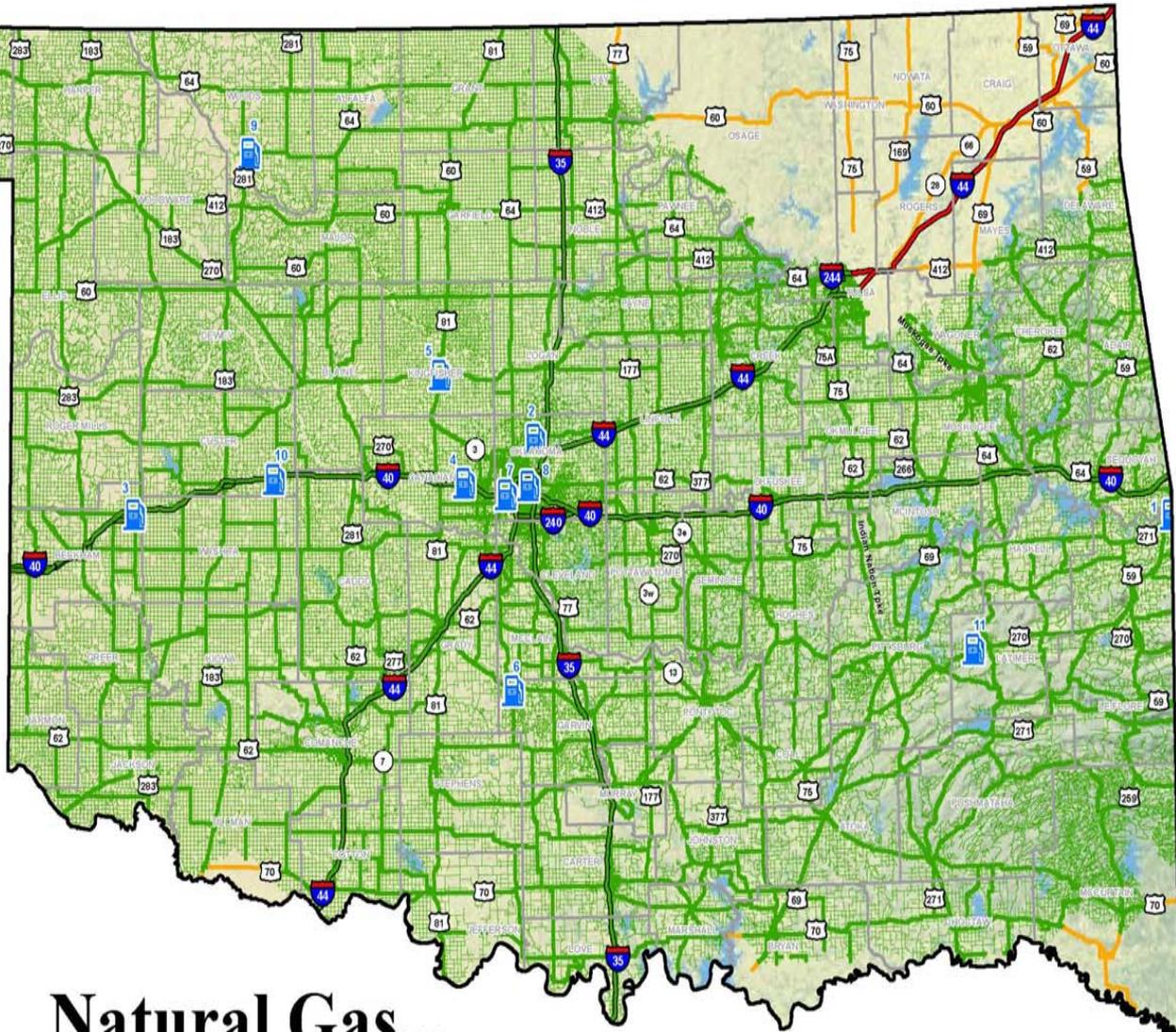


- **An income tax credit to the buyer of a dedicated or bi-fuel CNG vehicle:**
 - ▶ **50 percent** of the incremental cost of the vehicle or **50 percent** of cost to convert vehicles
 - ▶ No incremental cost cap
 - ▶ EPA certification is only requirement
 - ▶ No provision for transfer of tax credit if buyer is a tax-exempt entity
 - ▶ Credit available to already-converted "used" vehicles at **10 percent** of purchase price, capped at **\$1,500** – so long as credit has not been taken before in Oklahoma
- **Fuel Station Equipment Tax Credit:**
 - ▶ **75 percent** of cost of CNG or LNG fueling equipment placed in service that year
 - ▶ No cost cap and multiple credits may be taken on same property for additional investments

NGV Travel within the State of Oklahoma



1. **ARKOMA**
ON-CUE EXPRESS AT CHESAPEAKE'S FIELD OFFICE
4419 Main Street
Arkoma, OK 74901-0248
2. **EDMOND**
ON-CUE EXPRESS #108
900 S. Broadway
Edmond, OK 73034
3. **ELK CITY**
HITCHHIK STORE
515 South Main Street
Elk City, OK 73644
4. **EL RENO**
ON-CUE EXPRESS AT NOMAC'S FIELD OFFICE
3401 S. Radio Road,
El Reno, OK 73036
5. **KINGFISHER**
LOVE'S COUNTRY STORES
203 S. Main
Kingfisher, OK 73750
6. **LINDSAY**
ON-CUE EXPRESS AT CHESAPEAKE'S FIELD OFFICE
1407 S. E. 4th Street
Lindsay, OK 73052
7. **OKLAHOMA CITY**
ON-CUE EXPRESS #100
5900 W. Reno
Oklahoma City, OK 73127
8. **OKLAHOMA CITY**
ON-CUE EXPRESS #101
1 NW 23rd Street
Oklahoma City, OK 73013
9. **WAYNOKA**
ON-CUE EXPRESS AT CHESAPEAKE'S FIELD OFFICE
32744 State Highway 45
Waynoka, OK 73860
10. **WEATHERFORD**
ON-CUE EXPRESS AT CHESAPEAKE'S FIELD OFFICE
2020 Eagle Road
Weatherford, OK 73096
11. **WILBURTON**
ON-CUE EXPRESS AT CHESAPEAKE'S FIELD OFFICE
4980 Highway 270 West
Wilburton, OK 74578



Natural Gas...

Clean, Affordable,

Abundant, OKLAHOMAN.

11 New Public CNG Stations in Operating Areas
To Open By Year End 2010
70 Total OK Public CNG Stations

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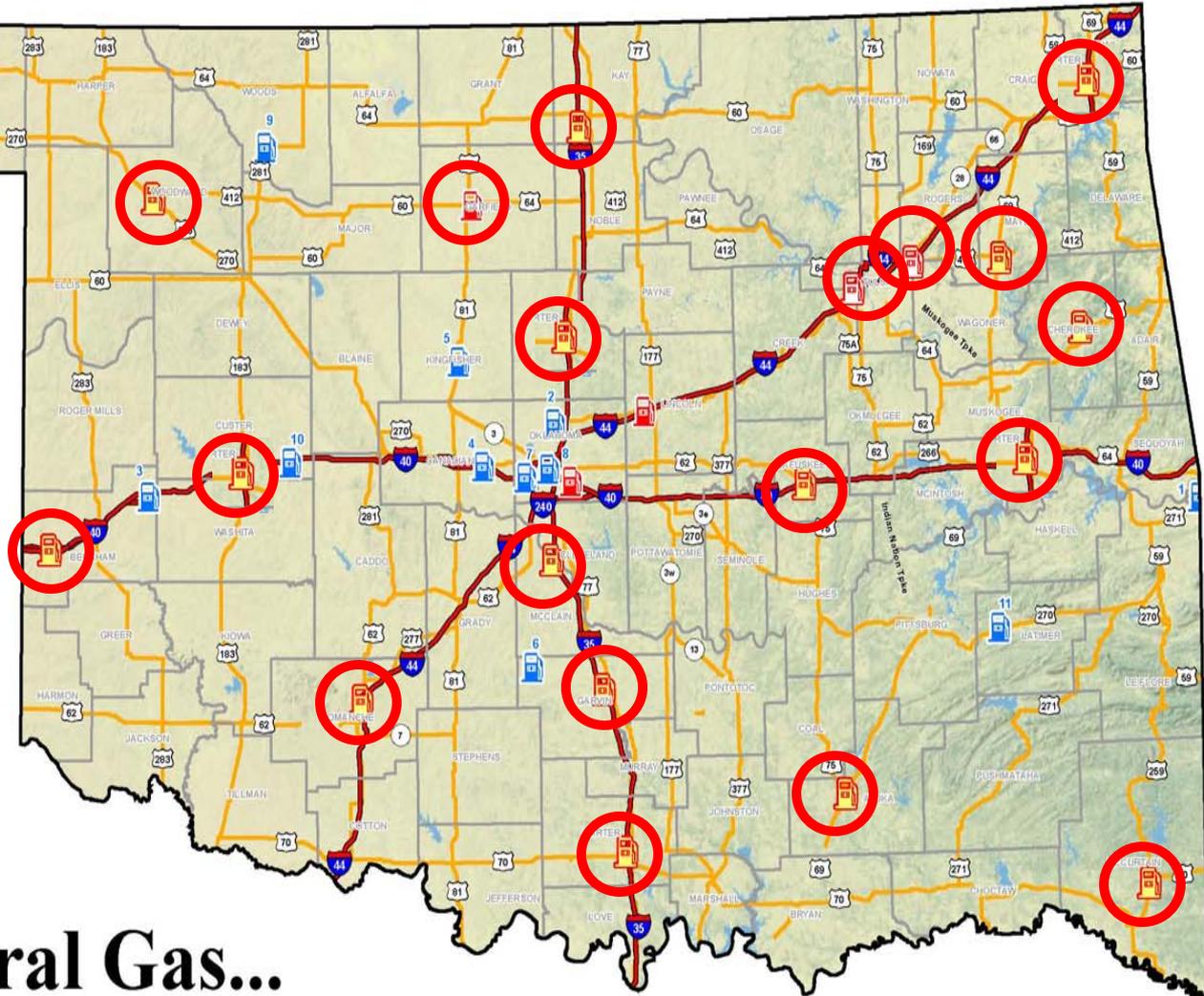
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Quality Guaranteed



Legend

- CHK CNG Stations
- Loves Locations
- OnCue
- QuikTrip

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Demand: A Necessary Focus

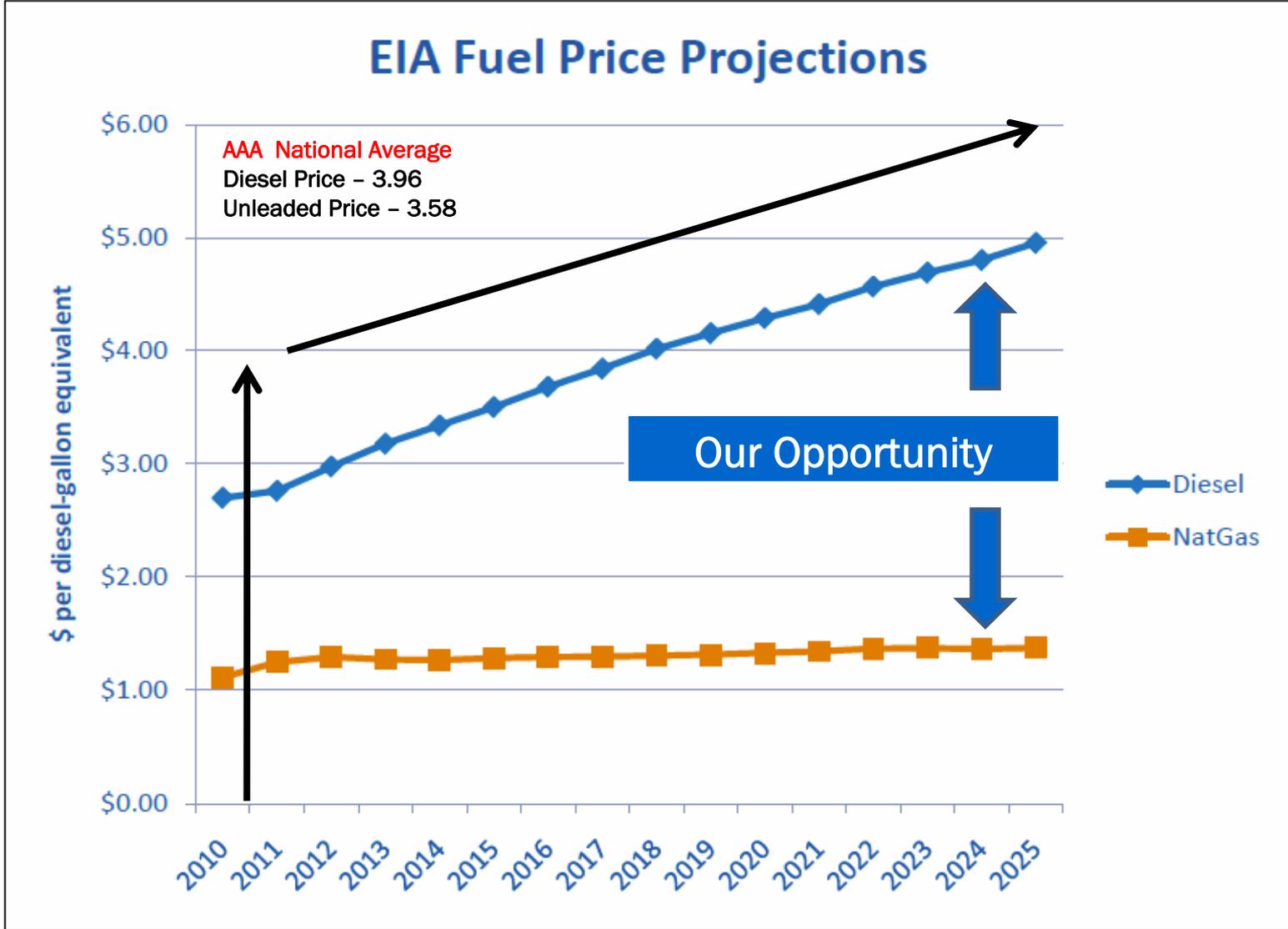


Growing Global Oil Demand Is an American Disaster Waiting to Happen

- By 2020, the IEA predicts oil consumption will increase 60%
- During that time, China's consumption of oil will increase 7.5% each year; India will increase 5.5% each year
- Oil is predicted to be at least \$200/bbl by 2030
- To keep up with the demand, OPEC countries will have to add 64 million barrels of production per day for the next 22 years*
 - ▶ This needed growth will require **\$350 billion per year** on new projects
 - ▶ OPEC only spent **\$390 billion on new projects** from 2000-2007



Diesel vs. Natural Gas Prices



Source: AAA Daily Fuel Gauge report as of 3-28-2011

The Case for Transportation

Petroleum Fuel Displacement for Vehicles

- **Freight Truck: 12,000 gallons/year**
- **Transit Bus: 12,000 gallons/year**
- **Garbage Truck: 9,000 gallons/year**
- **Airport Shuttle: 5,800- 7,200 gallons/year**
- **Taxi Cab: 5,000 gallons/year**
- **Delivery Truck: 4,500-5,500 gallons/year**
- **School Bus: 2,200- 2,800 gallons/year**
- **Light Duty Truck: 2,000 gallons/year**
- **Consumer Vehicle: 1,000 gallons/year**



Each National Fleet Using Natural Gas Is An Economic and Clean Energy Stimulant

Using AT&T's vehicle replacement program as an example:

- The impact of buying or converting 15,000 vehicles to cleaner technology over a 10-year period.
- Should reduce gasoline consumption by more than 49,000,000 gallons
- Trim carbon dioxide emissions by 211,000 metric tons
 - ▶ the equivalent of removing more than 38,000 vehicles from the road for a year.
- In addition, the AT&T replacement program will help support an average of 1,000 vehicle manufacturing related jobs each year from 2009-2013.



- **FLEET: Chesapeake Fleet Transformation and Internal Market Development**

- *Strategic development focused on market enhancing initiatives with concentrated alignment with CHK fleet area*

- **STATE: Chesapeake Strategic State Market Development**

- *Strategic initiatives and opportunity development located within CHK's operational states in an effort to augment current NGV opportunities*

- **NATIONAL: National Market Development and Policy Opportunities**

- *Market development efforts at a national perspective that can foster, support, and stimulate value-adding strategic demand for NGVs*

- **EDUCATION: National Communication and Education**

- *Educational efforts focused on strategic consumer groups and particular market segments for early adoption opportunities for NGVs*

- **MARKETING: Chesapeake Unique Marketing Applications**

- *Creative, sustainable, and iconic applications that provide a strategic opportunity for enhanced educational and promotional efforts for the versatility, benefits, and realities of natural gas vehicles*

Natural Gas Vehicles Help Oklahomans Reduce Their Costs and Enhance Our Economy



We are successful when Oklahomans work together



+



=



RETAILER

(Supply)

Local retailer invests in CNG infrastructure

FLEET

(Demand)

Energy sector uses CNG to provide base demand while saving the company on fuel cost

WINNERS

Our communities, schools, families, and governments now have access to CNG

Oklahoma has more than 62 CNG stations; many more under development

CHK's National Natural Gas Fleet



Projected Annual
Fuel Savings for Converted Fleet
within next 36 Months

4,119+ CNG Fleet Vehicles x \$1,850 annual
fuel savings (even @ a \$1.00 margin) =

\$7,620,000

CHK Example:

All 4,119+ trucks will be on
natural gas by 2013

4 Phases:

Oklahoma - 2010 ✓

Louisiana/North Texas - 2011

Eastern states (PA, WV, OH) - 2012

Rockies and South Texas - 2013

*Partnering with public retailers
for CNG stations in
operating areas

Projected Annual Fuel Savings

CNG Fuel Savings Model Assumptions:

- **CHK Vehicle travels 30,000 miles per year**
 - ▶ Average life of CHK vehicle is 3 years
- **Annual gasoline consumption per vehicle 2,310 gallons**
 - ▶ 13 mpg

Annual CNG Savings Per Vehicle			
Utilization (%)	80%	85%	90%
2,310	1,850 GGE	1,960 GGE	2,080 GGE
\$.75	\$1,387.50	\$1,470.00	\$1,560.00
\$ 1.00	\$1,850.00	\$1,960.00	\$2,080.00
\$ 1.25	\$2,312.50	\$2,450.00	\$2,600.00
\$ 1.90 OK Savings Today	\$3,515.00	\$3,724.00	\$3,952.00

What Can You Do?

- Learn More
- Convert Your Fleets
- Educate your peers and community
- Contact your federal and state representatives
- Talk to local fleets and utilities
- Be a champion for natural gas