



Alternative Fuel Showcase

Alleyn Harned
Virginia Clean Cities
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How do we get around sustainably

How do we take care of ourselves
Environment and health

How do we build our economy

How do we support our domestic energy security
Carbon footprint
Renewable energy

Business as usual? What are some alternatives

- Carbon Monoxide (CO)
 - Cardiovascular disease, damage nervous system 56-95% of US CO is emitted by vehicles
- Nitrogen Oxides (NO_x)
 - Respiratory damage – autism link - 55% from vehicles
- Particulate Matter (PM)
 - Aggravate asthma, emphysema, bronchitis, heart disease, lung disease, water pollution – directly from vehicles
- Ozone
 - Smog – reduce lung function
- Greenhouse Gases
 - Global pollutant, CO₂

- Rising Petroleum Prices

 - U.S. Owns 2-3% of world oil reserves

 - U.S. Uses 25% of worlds oil

- Volatility of Petroleum Market

 - 2013 highest fuel costs on record in U.S.

 - Significant production domestically, but 50% imports

- Survey Finds 62% of Fleet Managers Plan to Purchase More Fuel-Efficient Vehicles in 2013

 - 70% of respondents think fuel cost may go up in 2013

- Petroleum = most consumed energy source in U.S.
- U.S. spends
 - \$1 million per minute on petroleum
 - \$Nearly one billion per day on petroleum imports
 - \$5.7 billion per week on petroleum imports
 - \$297 billion per year on petroleum imports
- About half of petroleum used is imported



Petroleum in US

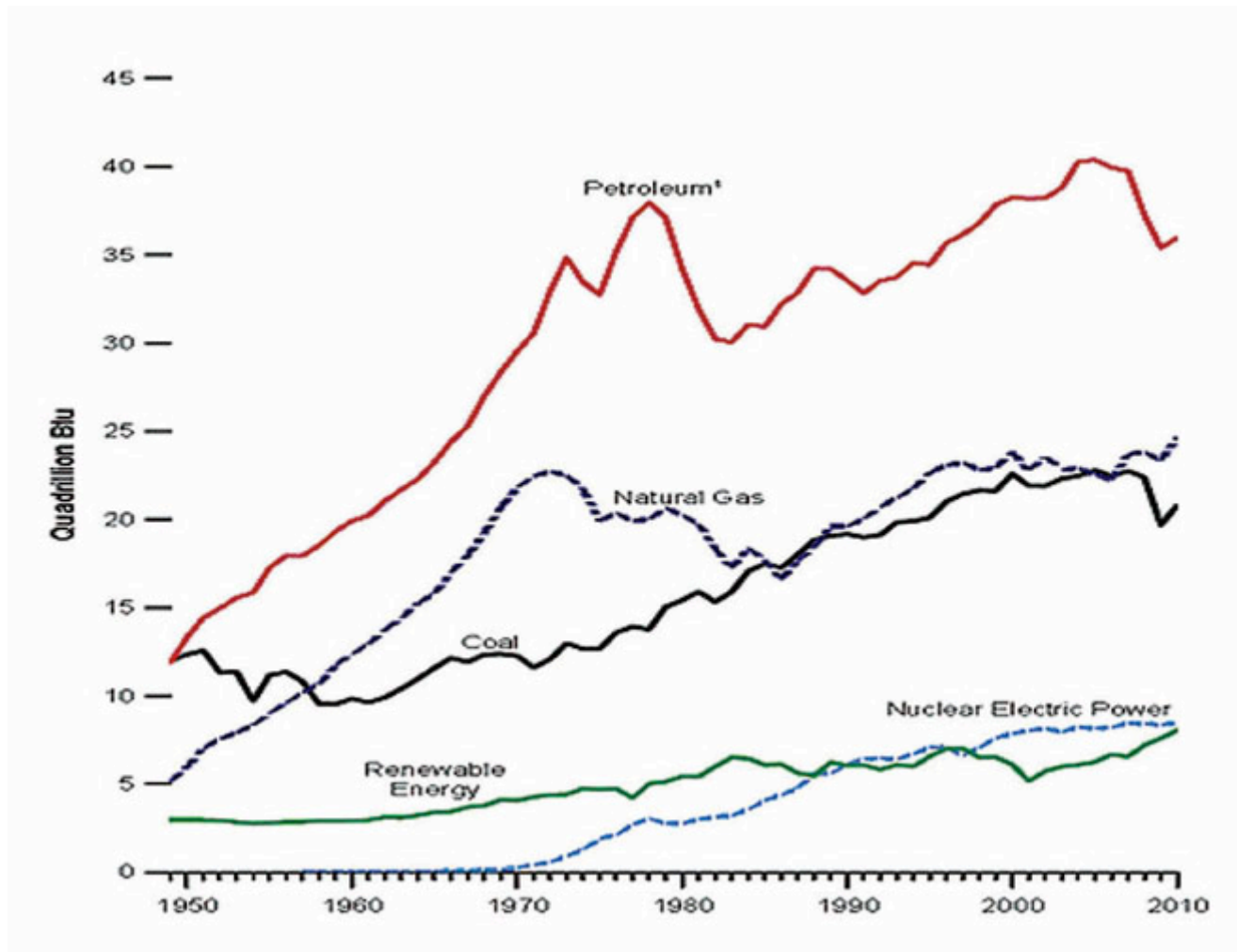
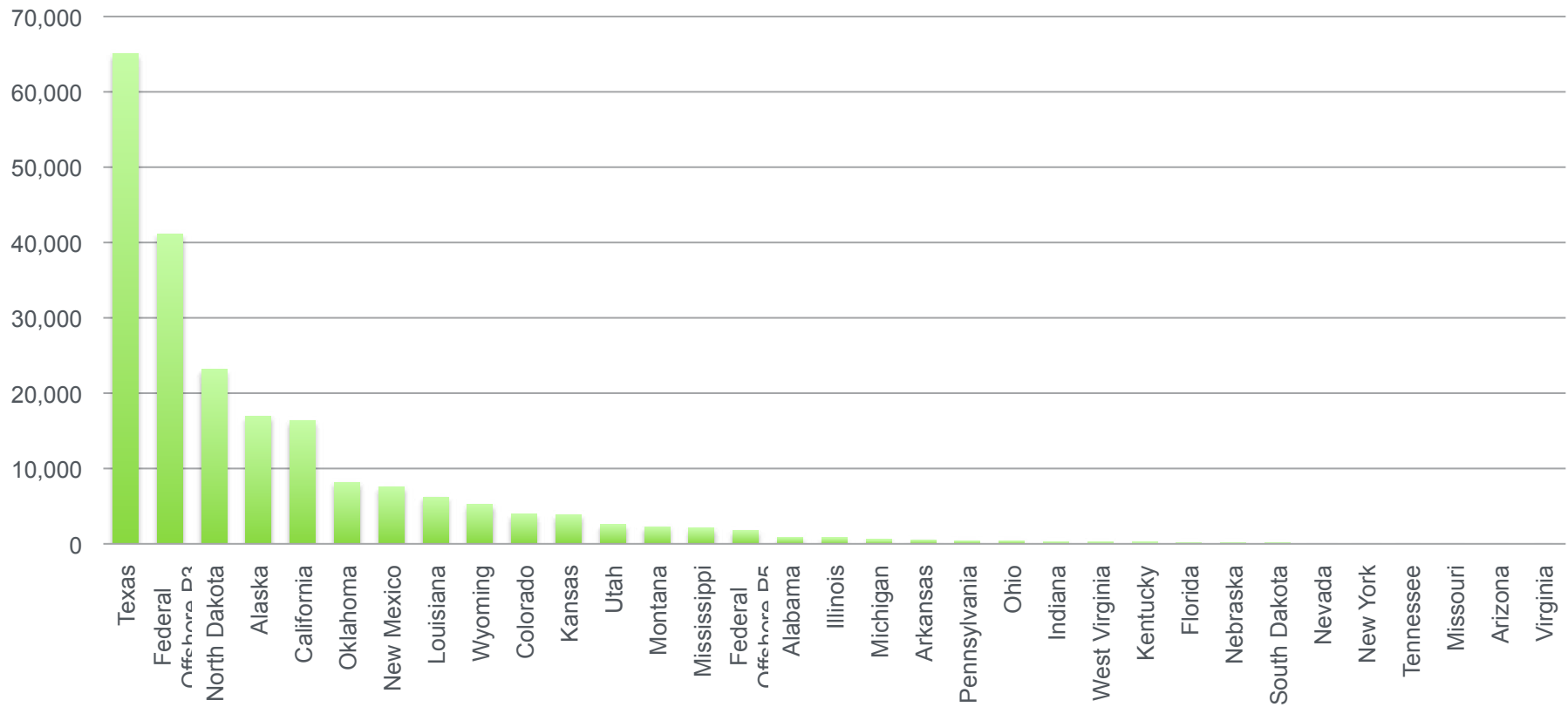


Figure 2: Primary energy consumption by major source, 1949, 2010. Source: EIA Annual Energy Review 2011.

U.S. Oil Production Monthly Thousand Barrels (Oct 2012, EIA)



Virginia Clean Cities Snapshot



One designated statewide Coalition in Virginia - since 1996

501c3 not-for-profit & James Madison University partnership

Supported by stakeholder members, DOE, DMME, and grants

Managing alt fuel deployment and education programs on behalf of Governments, fleets, and other stakeholders

Strategies:

- Partner with States & Local Organizations, Public and Private fleets
- Provide Outreach, Education, & Information Resources
- Facilitate Infrastructure Development
- Provide Technical & Financial Assistance

Platinum Level Sponsors & Strategic Partners



Clean Cities: What's Included ?



Technology Portfolio:

- Alternative (non-petroleum) Fuels & Vehicles
 - Biodiesel, Ethanol, Hydrogen, Electric, Propane, Natural Gas
- Advanced Vehicles (e.g., HEVs, PHEVs)
- Vehicles and Driver Choices that Increase Fuel Economy
- Idle Reduction

2011 Coalition Activity

8.5 million gasoline gallon displacement

60,000 tons of GHG reduction

Virginia's Growing Alt Fuel Effort

286 Alt Fuel Stations (+100 in '12)

80 fleets with Alt Fuel Vehicles

15,206 Alt Fuel Fleet Vehicles

Virginia Alternate Fuel Fleet Vehicles 2012

