



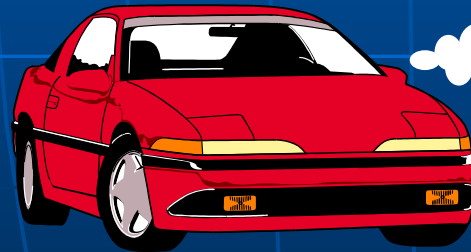
**Presentation  
to Great Lakes Regional  
Pollution Prevention  
Roundtable,  
September 24, 2004**

**Sam Spofforth,  
Executive Director,  
Central Ohio Clean Fuels Coalition  
(614) 292-5435  
[sam@cocfc.org](mailto:sam@cocfc.org)  
[www.cocfc.org](http://www.cocfc.org)**

# About COCFC

- Non-profit organization based at OSU Center for Automotive Research
- Mission: increase energy security, improve AQ, strengthen Ohio's economy by advancing alt fuels, efficient vehicles and trans tech
  - We deploy vehicles, fuels, refueling stations, technologies;
  - educate policy-makers, target audiences, and the public

# Transportation's Share of Selected Air Emissions



CO – 79%

NO<sub>x</sub> – 49%

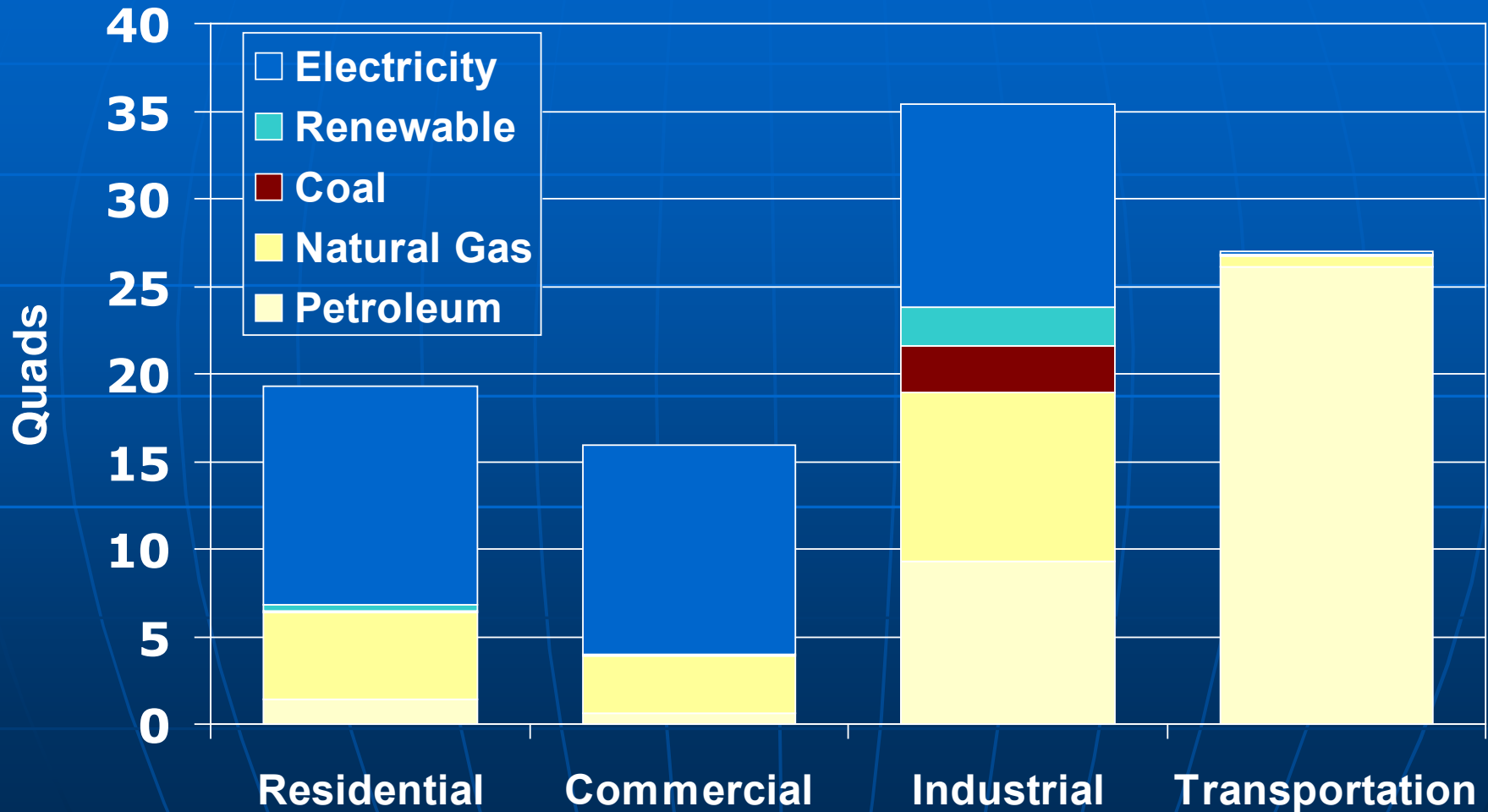
VOCs – 42%

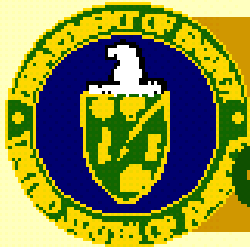
CO<sub>2</sub> – 32%

PM – 26%

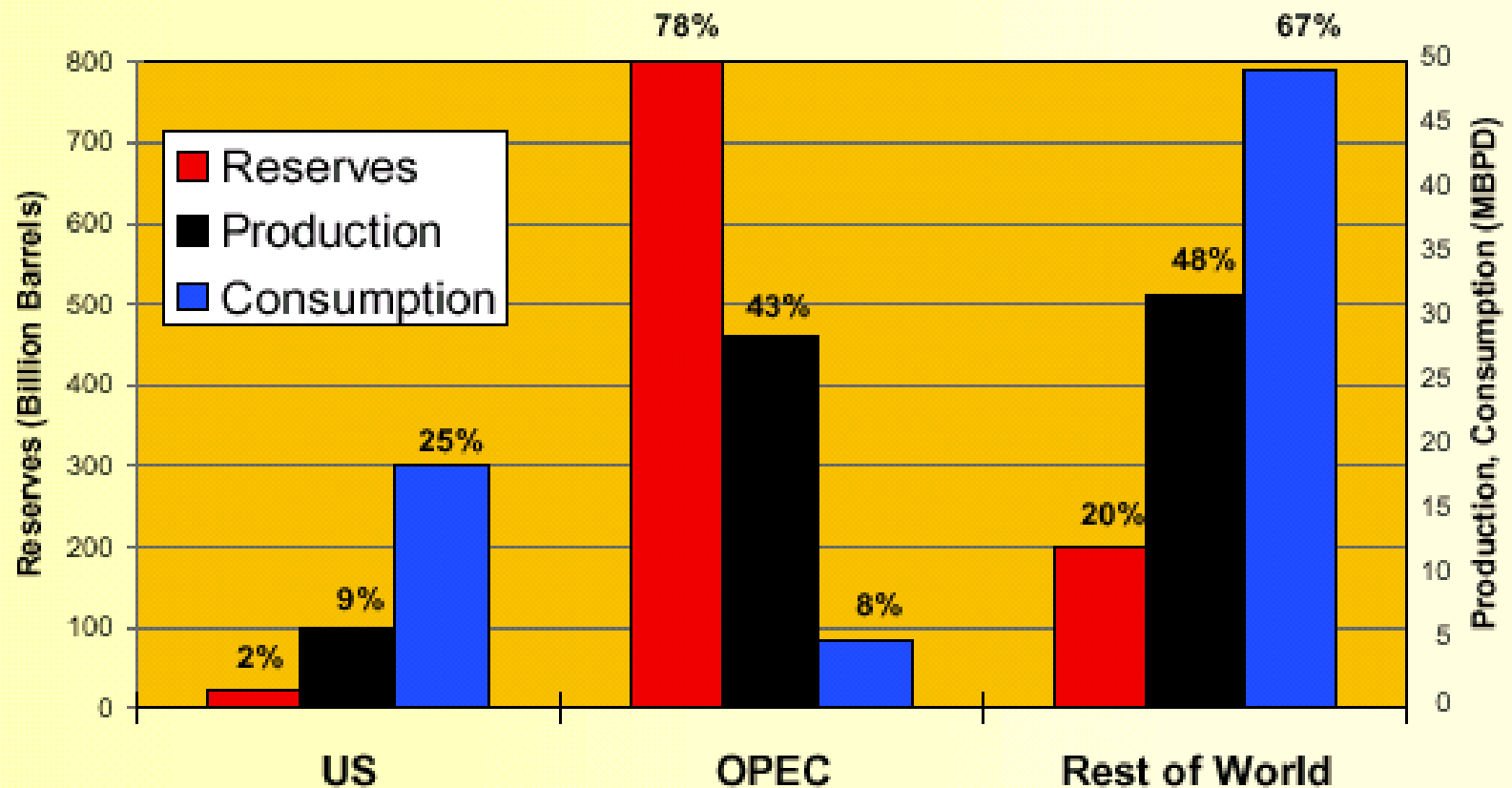
Motor vehicles, especially diesel powered, also emit substantial carcinogenic pollutants.

# Energy Use Within Sectors





# World Oil Reserves are Consolidating in OPEC Nations



Source: DOE/EIA, International Petroleum Statistics Reports, April 1999; DOE/EIA, International Energy Annual 1997, DOE/EIA0219(97), February 1999.

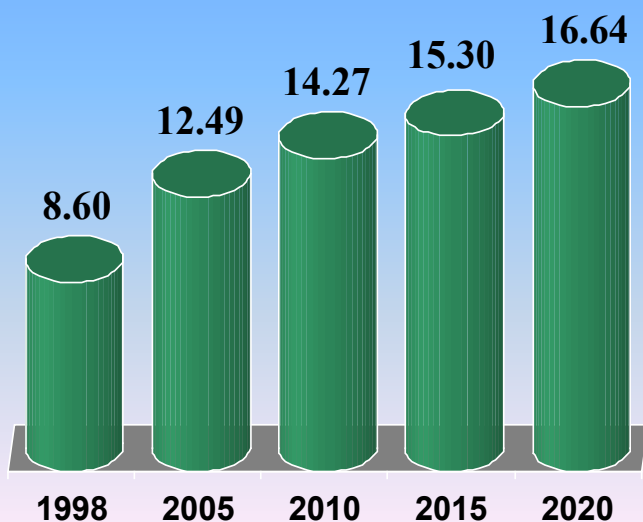


# Economics of Oil

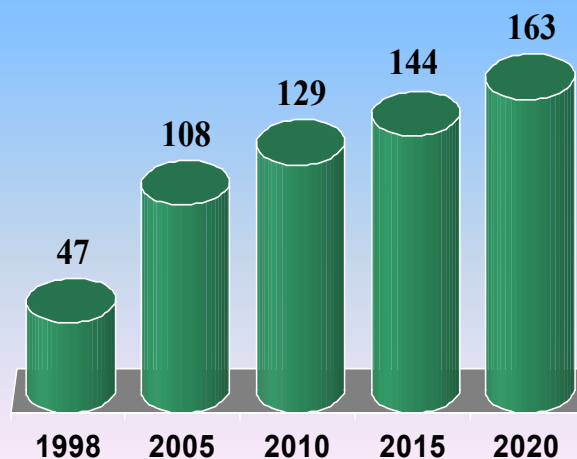
In 1973 the U.S. imported about 25% of oil consumed. In 2003, we imported 63%.

The true costs of petroleum (direct military, lost investment) would add \$3.67 per gallon of gas.

**U.S. Imported Crude Oil & Petroleum Products  
(Million Barrels per Day)**

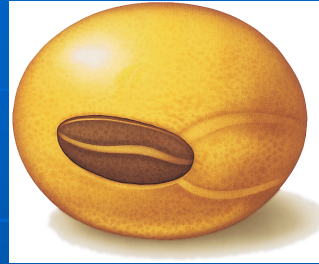


**Annual Cost of U.S. Crude Oil & Petroleum Imports  
(Billions 2000\$)**



# Many Solutions are Here Now...

- Biodiesel
- Ethanol
- Natural Gas
- Propane
- Hybrids
- Electric Vehicles
- Idle Reduction
- Fuel Economy Improvements



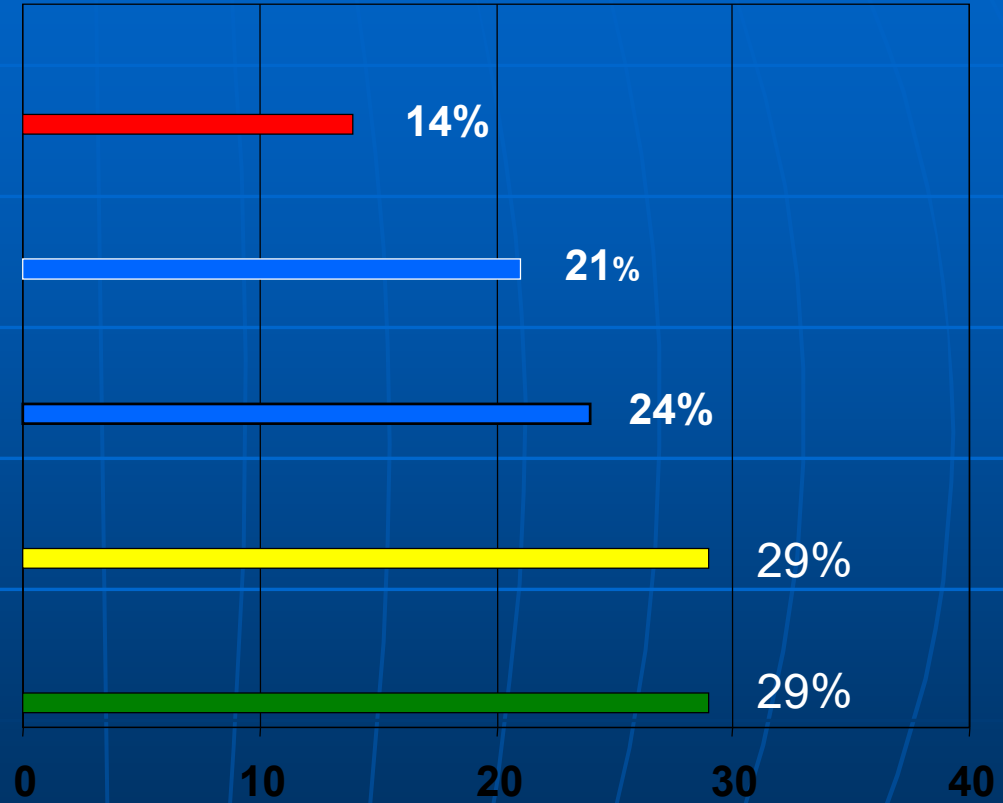
# ...Others are Coming

- Everything Available Today plus...
- Improved/More Hybrids
- More Efficient ICE/Drive Train Fuel Economy
- Better Electric Vehicles
- Smaller, Lighter, Cheaper Idle Elimination Equipment
- Hydrogen – H/NG Blends, ICE, Fuel Cells



# WTW Efficiencies of Hybrids Impressive

	Well-To-Tank	Tank-To-Wheel	Overall Well-to-Wheel Efficiency (%)
Average 2003 Car	79%	18%	14%
1999 Prius	79%	27%	21%
2003 Prius	79%	31%	24%
2004 Prius with HSD	79%	37%	29%
Commercial FCHV	58% Natural gas-H <sub>2</sub>	50%	29%
Based on US-market fuels and US combined fuel economy			
Source: Toyota			



# Transportation Biofuels Policy

- Ohio Biofuels and Energy Efficiency Task Force (March 2004 Report)
- Focusing on demand side – fuel use incentives and infrastructure development
- Other states have enacted policies – e.g. Minnesota, Iowa, Illinois, Indiana, Pennsylvania (not much yet in Michigan or Ohio)

# Possible Initiatives in Ohio

- Biofuels (E85, B20) mandates for state fleet vehicles
- Incremental cost buy downs (especially biodiesel)
- BTU-based motor fuel taxes
- Retail infrastructure grants
- Grants to improve accessibility to distributors and customers
- B2 mandates (all diesel fuel sold)

# Questions?

Central Ohio Clean Fuels Coalition

930 Kinnear Road

Columbus, OH 43212

(614) 292-5435

[sam@cocfc.org](mailto:sam@cocfc.org)

[www.cocfc.org](http://www.cocfc.org)