

OIL: *Transporting* our Climate One Vehicle at a Time

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Geo 302C

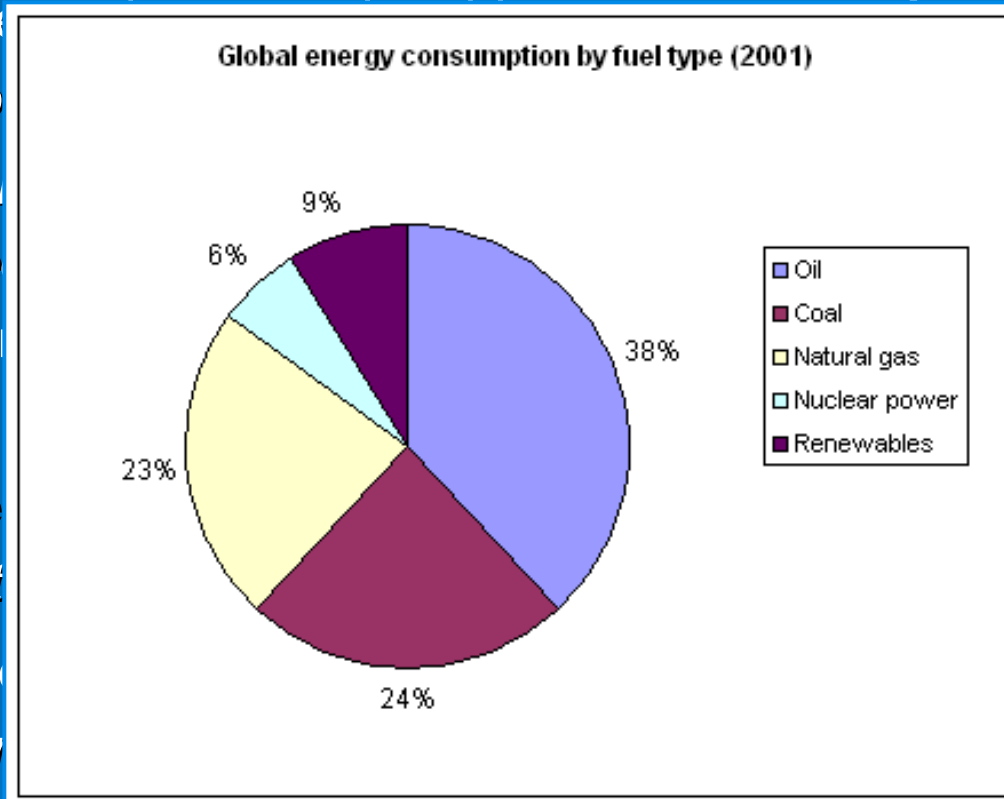


Overview

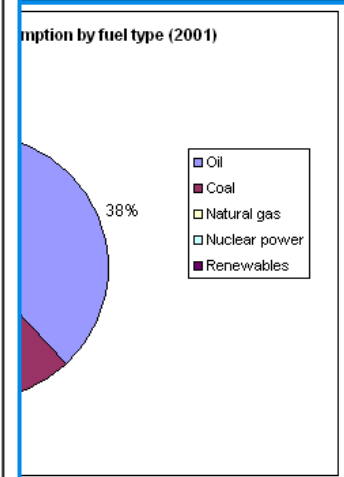
- Introduce interesting and insightful facts about fossil fuels
- Explain why these facts are important
- Prove that burning fuel is effecting the climate
- Present a cleaner alternative
- Compare and contrast the old alternatives with the new
- Offer ways to get involved and make a difference

Opening Facts

- Many of the... from our fo
- **Fossil fuel energy ne** Coal, oil a
- Petroleum country's e *transportat*
- Globally the *average Am*
- **70% of the nation's goods are transported in diesel-powered vehicles**, helping to make it America's primary commercial fuel.



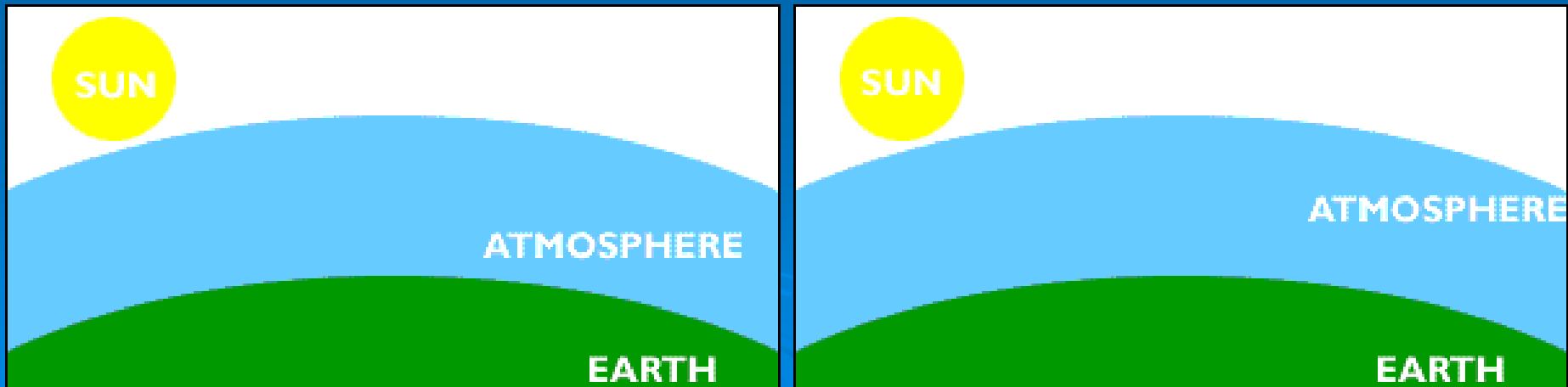
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a year—the

Proof that oil effects our climate

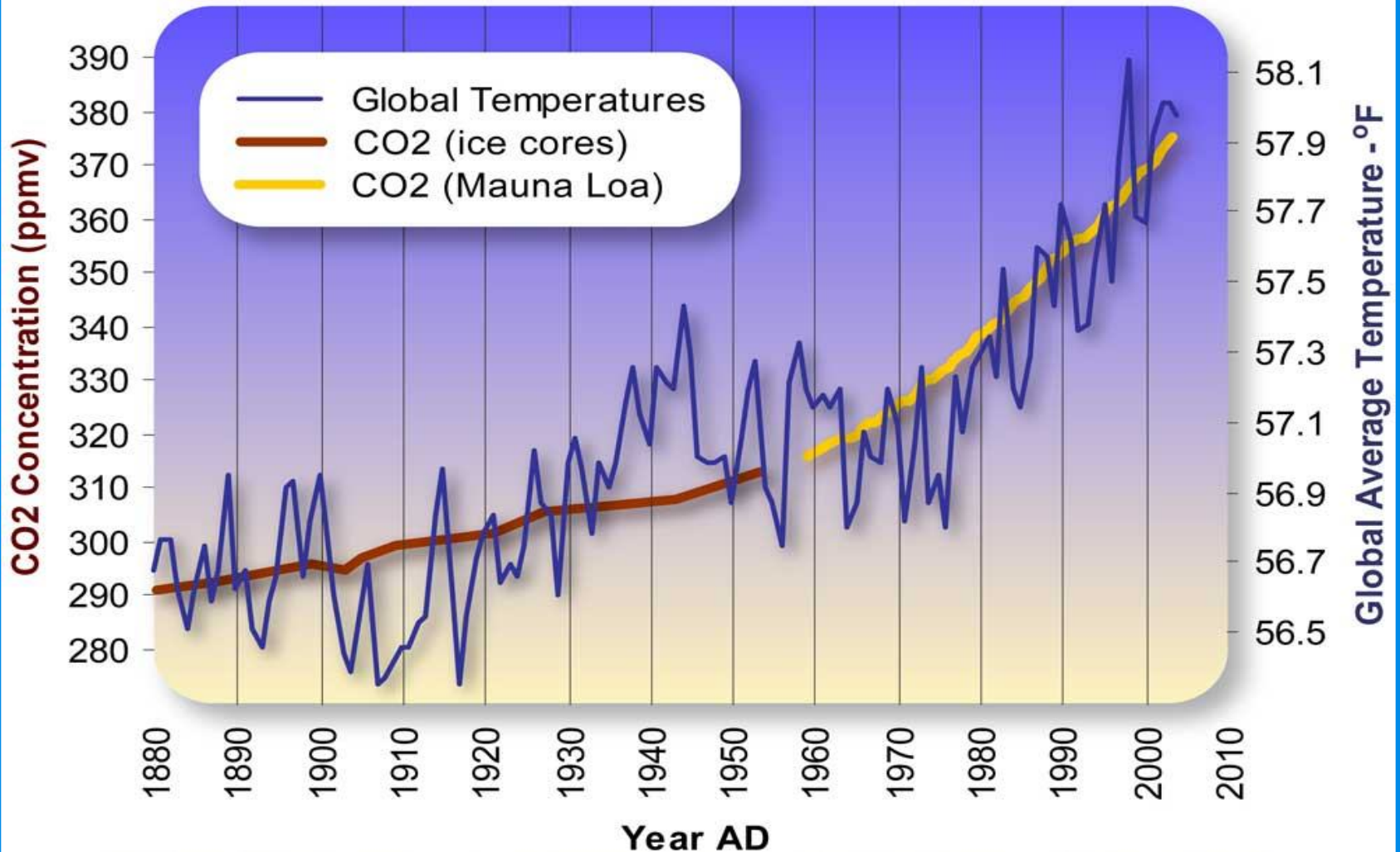
- The burning of fossil fuels by humans is the largest source of emissions of carbon dioxide.
- In the United States, more than 90% of greenhouse gas emissions come from the combustion of fossil fuels.



The steady increase of greenhouse gases are contributing factor to the earth's warming climate.

Coincidence or Science

Global Average Temperature and Carbon Dioxide Concentrations, 1880 - 2004



A *Greener* Alternative What is Biodiesel?

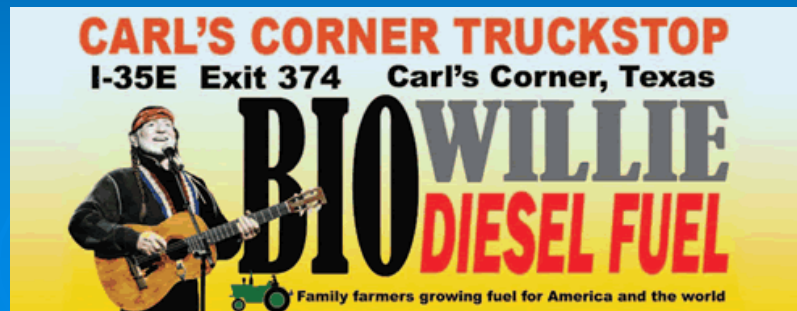


- Renewable fuel
- Completely natural (contains no petroleum)—can be 100% vegetable oil based
- Reduces carcinogenic emissions as well as gases that enhance global warming
- Can be used in any diesel engine —in either pure form or blended with petroleum diesel



Pacific Biodiesel Texas

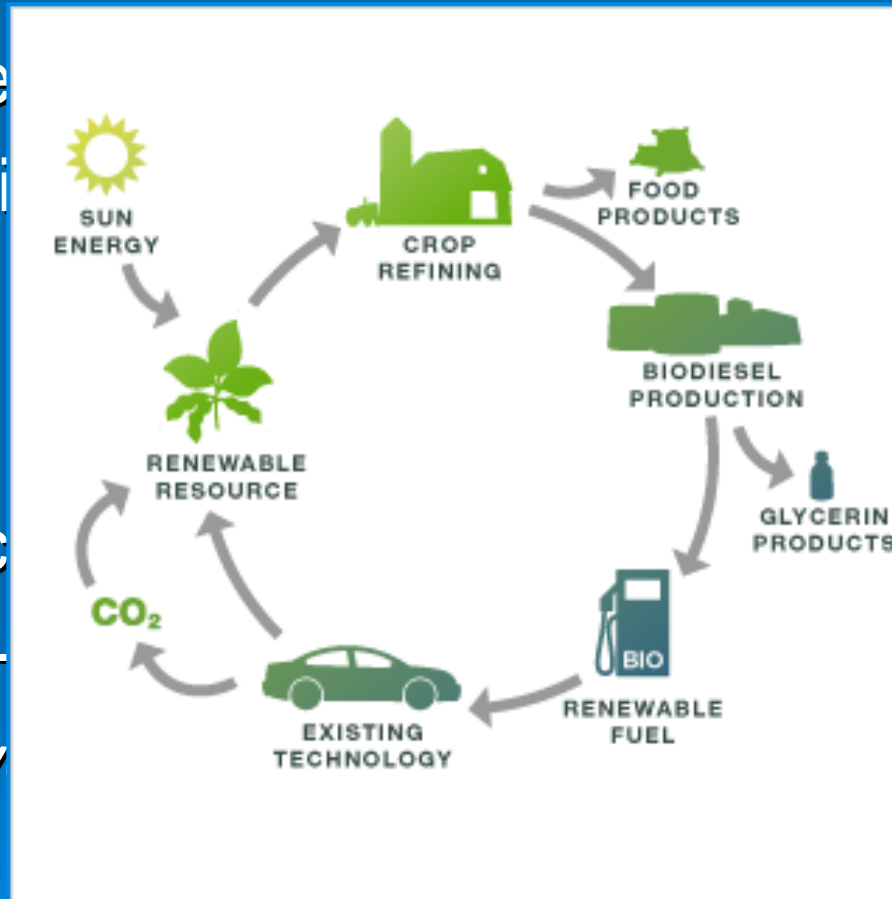
- Location: Carl's Corner, Hillsboro, Texas
- Capacity: 8,000 gallons per day - over 2 million gallons per year; designed for initial expansion to double capacity
- Feedstock: designed for soybean meal; goal is to utilize most soybean meal and locally collected used cooking oil
- Target date for full production: end of August
- Distribution: Carl's Corner Truck Stop



How Does it Work?

in comparison to petroleum

- When burned as carbon dioxide
- Biodiesel is alcohol and
- Process is carbon dioxide removes by-product—glycerol

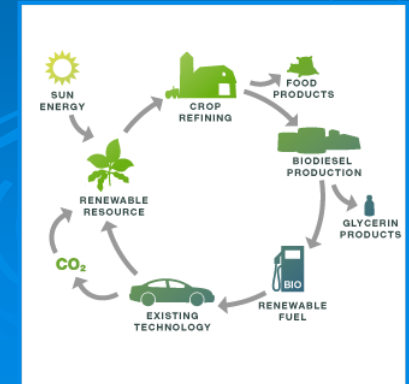


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Why Biodiesel?

➤ Power

- Can be used in existing engines without negative impacts to operating performance.

➤ Efficiency

- Virtually the same MPG rating as regular diesel
- Extends the life of the engine

➤ Storage/Combustibility/Safety

- Because its non-toxic, biodegradable, and non-flammable, handling and storage are safer than conventional petroleum diesel fuel.

➤ Production/Refining

- Zero emissions from production facilities



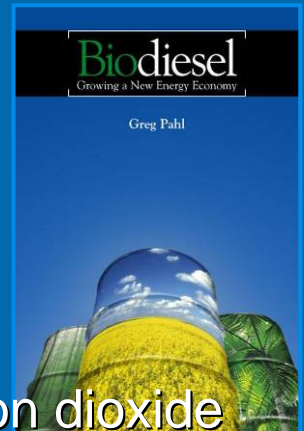
Environmental Impact



- Only renewable alternative diesel fuel that actually **reduces** major greenhouse gas components in the atmosphere.
- In September 2006, in a report from the national laboratory of the U.S. Department of Energy, the National Renewable Energy Laboratory identified the advantages of using a **B20 biodiesel blend**:
 - Reduces life-cycle petroleum consumption by 19%
 - Reduces life-cycle CO2 emissions by 16%
 - Further reduces hydrocarbon emissions by 20%
 - Significantly reduces toxic emissions
 - Reduces PM emissions
 - No impact on NOx



How Can You Help?



➤ Be educated:

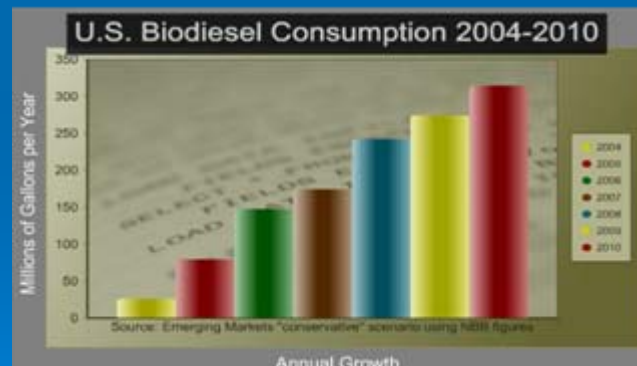
- “Diesels really make sense only if you care about carbon dioxide emissions and global warming, and like most Americans, I don't. I even think warming up Canada a bit might be a good idea.” –Flint
- Diesel passenger vehicles in the US has increased by 80% from year 2000-2005 (301,000-550,000)

➤ Spread the word

- Tell a friend
- Bumper Stickers

➤ Support local efforts

- <http://www.austinbiofuels.com/>



Work Cited

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