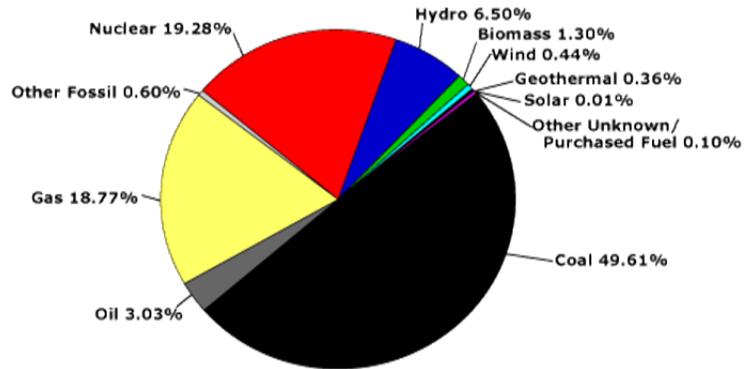




4. What energy was used in your household that was not on your log (dishwasher, refrigerator, washing machine, clothes dryer, TV, computer, heater, air conditioner, water heater, etc.)?
5. Look at the chart on <http://www.eia.doe.gov/emeu/recs/recs2001/enduse2001/enduse2001.html>. *How might this information change your answer in the second question?*
6. The pie chart shows all of the sources used to produce electricity. Remember that 60% of electric consumption is residential. *Do we use more non-renewable or renewable resources?*

Fuel Mix for U.S. Electricity Generation



Source:  
U.S. EPA, eGRID, year 2005 data.

7. One gallon of crude oil can produce about 17 kWh. There are 42 gallons of oil in a barrel. *How long would that barrel of oil last for your personal energy usage?*
8. Multiply the number of people in the US (<http://www.census.gov/population/www/popclockus.html>) by 27 kWh (average amount of energy usage per day) to find out how much energy we are using right now. Now multiple that number by 1.4 gallons and divide by 42 gallons. *That's how many barrels of oil we are using right now!*

### Discussion Questions

- Revisit the World Population web site at [http://www.worldpopulationbalance.org/population\\_energy](http://www.worldpopulationbalance.org/population_energy).
  - How does your energy use (lightbulb symbols) compare to people in China?
  - What about other countries with a greater consumption that population?
  - Why is the information from the two previous questions important?
- Energy in Texas has variable time-of-use rates. Electricity is more expensive between 1 and 6 p.m. on weekdays in summer and fall. These are the times with highest electric demand, largely because of air conditioning usage. Demand peaks earlier in the day during the winter; between 7 and 10 a.m. *When is the best time to run your dishwasher or clothes dryer?*
- Assume it is the year 2020. The non-renewable energy in the US now accounts for 30% of our available energy. We can still purchase 0.10% of our energy, but the rest must come from the other sources on the pie chart. Go back to your log. *How would you change your energy consumption and still maintain your life style?*

### Reality Check! Evaluation

- Did students reasonably identify and log their personal energy use? (at least 10 complete entries)
- Did students translate personal usage into *per capita* national consumption statistics?
- Were students able to formulate a practical exchange to lessen dependence on non-renewable energy sources? (examples of changes in energy consumption)