A Few Questions from US Primary Energy Consumption by Sector

This is a chart that shows the basics of the US energy use system. On the left are the sources, on the right are the use sectors. Your use of a device to view this chart puts you in the electric power sector, which uses around 38 percent of all primary energy.

The term primary energy just means the ways that energy is made available. For example, about 37 percent of all energy used in the United States comes from petroleum. See “Notes” at the lower right for more on that.

Of the petroleum we use, what share of its combustion is used in the transportation sector? Answer: 72%.

What share of all transportation energy use comes from petroleum? 92%

Here are eight questions to see if you are understanding the chart. Answers will follow on the second page after a long gap. Note that the upcoming quiz might have some of these questions, so this is more than just a chart training exercise! You would be wise to print it out and have it ready for the quiz this week.

1. What share of transportation energy comes from renewables? (by the way, most of that is ethanol is made from corn, but a tiny bit is from hydro, wind and solar electricity running through electric car batteries).
2. What share of coal combustion goes to electric power?
3. What share of energy used in making electric power comes from coal?
4. What share of energy used in making electric power comes from renewable energy? (hydro, wind, solar in order of significance)
5. Natural gas, the most flexible of the fossil fuels, has many uses. What share is used to make electrical power? (also note that its residential and commercial uses are mostly heating)
6. What share of renewable energy goes to making electricity? When we see a larger share of renewable energy making electricity than is then used to power transportation, the world will be a very different place – hopefully for the better.
7. What share of electricity comes from petroleum? Note that this is a very small share because per unit of energy petroleum is very expensive. More on this later when we look at electric vs gasoline powered autos.
8. What share of transportation energy comes from natural gas? Quite a few municipal busses run on compressed natural gas, but few autos.

Answers:

1. 5%
2. 91%
3. 34%
4. 17%
5. 26%
6. 57%
7. 1%
8. 3%