

01/2015

Re: Luddites and Laws

Dear Editor,

Beware of creationists or luddites when they start brandishing the "Laws of Thermodynamics" as Mark Van Norman does (Letters, Jan 9th, 2015). Physics is a wonderful intuition helper, but waving ones hands around will not suffice.

Data from the United States Energy Information Administration reveals not only that, no state gets all their electricity from burning coal, but that even in the worst state (West Virginia, which gets 96% of their electricity from coal), a gasoline powered car there produces nearly twice the CO₂ emissions as using electricity from a wall outlet. And that includes Van Norman's hand waving about electrical transmission losses.

How can that be? Two reasons: stationary power plants and electric motors have higher energy efficiencies than internal combustion engines. In fact only 20 to 25% of the energy in a gallon of gas actually gets to the wheels as power in cars equipped with tailpipes. An electric car converts energy to the wheels roughly 3 times more efficiently.

In a state such as Oregon where 56% of the electricity is produced from hydroelectric sources (not including wind and solar production), an electric car produces almost 1/10th the CO₂ as a gas vehicle.

However, it is true that electricity from coal produces more sulfur, arsenic, mercury, lead and uranium than electricity from other sources. But those aren't reasons for getting rid of electric cars. Those are reasons for getting rid of coal fired power plants.

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