

Electric cars, hybrids and... coal power?

Written by EarthTalk® From the Editors of E/The Environmental Magazine
Monday, 15 March 2010 13:24



Dear EarthTalk: Isn't the interest in electric cars and plug-in hybrids going to spur increased reliance on coal as a power source? And is that really any better than gasoline/oil in terms of environmental impact? -- *Graham Rankin, via e-mail*

It's true that the advent of electric cars is not necessarily a boon for the environment if it means simply trading our reliance on one fossil fuel—oil, from which gasoline is distilled—for an even dirtier one: coal, which is burned to create electricity.

The mining of coal is an ugly and environmentally destructive process. And, according to the U.S. Environmental Protection Agency (EPA) burning the substance in power plants sends some 48 tons of mercury—a known neurotoxin—into Americans' air and water every year (1999 figures, the latest year for which data are available). Furthermore, coal burning contributes some 40 percent of total U.S. carbon dioxide emissions. The National Academy of Sciences (NAS) estimates that coal mining and burning cause a whopping \$62 billion worth of environmental damage every year in the U.S. alone, not to mention its profound impact on our health.

Upwards of half of all the electricity in the U.S. is derived from coal, while the figure is estimated to be around 70 percent in China. As for Europe, the United Kingdom gets more than a third of its electricity from coal, while Italy plans to double its consumption of coal for electricity production within five years to account for some 33 percent of its own electricity needs. Several other countries in Europe, where green sentiment runs deep but economics still rule the roost, are also stockpiling coal and building more power plants to burn it in the face of an ever-increasing thirst for cheap and abundant electricity.

On top of this trend, dozens of electric and plug-in hybrid cars are in the works from the world's

Electric cars, hybrids and... coal power?

Written by EarthTalk® From the Editors of E/The Environmental Magazine
Monday, 15 March 2010 13:24

carmakers. It stands to reason that, unless we start to source significant amounts of electricity from renewables (solar, wind, etc.), coal-fired plants will not only continue but may actually increase their discharges of mercury, carbon dioxide and other toxins due to greater numbers of electric cars on the road.

Some analysts expect that existing electricity capacity in the U.S. may be enough to power America's electric cars in the near future, but don't rule out the possibility of new coal plants (or new nuclear power plants) coming on line to fill the gap if we don't make haste in developing alternate sources for generating electrical energy. And while proponents of energy efficiency believe we can go a long way by making our electric grids "smarter" through the use of monitoring technologies that can dole out power when it is most plentiful and cheap (usually the middle of the night), others doubt that existing capacity will be able to handle the load placed on even an intelligent "smart grid" distribution network.

Environmentalists—as well as many politicians and policymakers—maintain that the only viable, long-term solution is to spur on the development of renewable energy sources. Not long ago, the concept of an all-electric car charged up by solar power or some other form of clean renewable energy was nothing but a pipe dream. Today, though, such a scenario is within the realm of the possible, but only if everyone does their part to demand that our utilities bring more green power on line.

CONTACTS: EPA/mercury emissions; www.epa.gov/ttn/atw/utility/hgwhitepaperfinal.pdf .

SEND YOUR ENVIRONMENTAL QUESTIONS TO: EarthTalk®, P.O. Box 5098, Westport, CT 06881; earthtalk@emagazine.com. Read past columns at: www.emagazine.com/earthtalk/archives.php . EarthTalk® is now a

book! Details and order information at: www.emagazine.com/earthtalkbook