

Ferguson: Energy Matters

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Dislodging King Coal

The adoption of AB 32 and SB 1368 (the state's plan to curb greenhouse gases and prevent importing coal power) was tantamount to a declaration by California that it would resist the economic forces that promote the use of cheap coal power. California has promised to invest heavily in new non-fossil resources, knowing full well that they are more expensive than coal if ignoring the cost of global warming.

Now the bean counters are threatening this resolve by telling us that California cannot afford to reduce its dependence on coal. According to their economic models, we should cut more expensive natural gas instead, even though cutting the use of gas provides only half the benefits of cutting coal.

Burning coal to generate a kWh of electricity produces more carbon dioxide than any other source. Displacing coal-fired power reduces carbon emissions almost twice as much as displacing the same amount of electricity generated from natural gas. So eliminating the use of coal-fired power should be a high priority in California's global warming "solutions." Right?

Perhaps not.

Natural gas is more expensive than coal. To minimize costs, it makes some sense to reduce the use of the more expensive gas first. Unfortunately, reducing the use of gas rather than coal provides only half the global warming benefits.

Focused as it is on achieving the "least cost" solutions, California is headed toward the rather bizarre situation of expanding its reliance on wind, solar and geothermal power while continuing its reliance on coal for much of its electric energy.

That outcome may satisfy the bean counters, but it is counter-intuitive.

If additional electricity from renewable energy resources displaces gas rather than coal, twice as much renewable investment will be required to achieve the same emissions reductions. To put it another way, for the *same* investment in renewable resources, California will achieve *half* the emissions reductions if gas—rather than coal—is displaced.

Last year, the California Legislature passed SB 1368 to limit new long-term utility commitments to buy coal-fired power. While a step in the right direction, the law does not prohibit utilities from continuing to purchase electricity from coal on a

short-term basis. As long as coal is cheap, utilities can be expected to continue to do so absent regulations to the contrary.

Nevertheless, the clear intent of the legislation was to reduce California's reliance on the most carbon intensive fuel—coal. This intent is now threatened by rules that may be promulgated in the name of “least cost” emissions reductions.

There are so many agencies, advisory committees, consultant reports, and bureaucratic maneuvers snarling AB 32 implementation. It's nearly impossible to keep track of all the assumptions being made. Any assumption that coal-fired power is too cheap for California to forego should be re-examined.

Generation technology to replace electricity from fossil fuels is available now and affordable. Also, the public understands the need to make the requisite investments over the next 12 years. Because coal is so carbon intensive, cutting California's reliance on coal-fired power is the obvious first step to reduce global warming pollution.

Common sense, however, appears to conflict with the current mantra, saying that we must rely on “market forces” to reduce carbon emissions. Since coal is so cheap, it will be the last source of electricity displaced by “market forces.” These same “forces” are what got us into the current predicament—half of all U.S. electricity is generated from coal because it is cheap. China is being “forced” by the same “forces” to build new coal-fired power plants weekly.

Market forces are the cause of the global warming problem, not the solution.

Sooner or later, we will have to reduce the use of both coal and gas unless these industries stop dumping their combustion products into the atmosphere. Doing so will require massive investments in clean energy. That means dislodging King Coal as quickly as possible from the fortress defended by “market forces.”

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