

## [Earth Day and Coal: It's Hard to Win a Fight Against a Cheap BTU](#)

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I decided to spend Earth Day thinking about Coal.

First on my list was a trawl through Google Images, looking for massive displays of global coal consumption. [Coal porn](#), if you will. Next up was to send out a bunch of cheeky twitter messages, whose intent was to [mash-up coal, earth day, and popular culture](#). I basically just wanted to wish everyone a [Happy Coal Day](#). Or perhaps just remind them that coal was still very much with us, and that the world remained on its [merry pathway](#) of coal consumption. Finally, I got down to the innards of the [BP Statistical Energy Review](#) and was reminded that China, for example, doubled its coal use in just 7 years: going from 667 million *toe* (tonnes of oil equivalent) in 2000, to 1311 million *toe* in 2007.

My point: it's hard to win a fight against a cheap BTU. Wind is good. Solar's even better. And as my readers know, I'm delighted that each are advancing. From China to South America, from the deserts to the Great Plains the world continues to build new sources of power generation. In the EU, Wind Power is now the [fastest growing](#) new source of megawatts and this looks also to be the case in the US. China, which has suffered a series of ghastly coal disasters is also scrambling to add cleaner power and is expected to spend as much as 55 billion in the next fifteen years on Solar. The US is of course further tightening the regulatory environment for coal. This trend is several decades old, and explains the contribution of natural gas to the US power grid. The problem however is that for much of the world, coal remains both a cheap and portable (and storable) source of energy. In fact, coal has a nasty habit of pricing itself *just below* nearly all other energy sources. This is why I've called coal a kind of anti-hero.



The country that got me thinking about Coal today was Indonesia. This is the fourth most populous nation on earth and for over 40 years it exported oil. But, having turned net oil importer in 2005, Indonesia officially left OPEC at the end of last year. And so I wondered, to what energy source will Indonesia's [240 million](#) people now turn? Well, my answer would be coal. After all, Indonesia is the [seventh largest](#) producer of coal in the world.

A barrel of oil currently runs you about 50 dollars USD. That is quite cheap and gets you 5.8 million BTU. But a ton of thermal coal will cost you 60 dollars USD and contains more than 20 million BTU. And there's another problem: while the easy coal is now gone in many areas of the world, coal remains generally far cheaper to extract than oil. Coal is also easily portable. Requiring no special containers, and can easily be broken up into small amounts and carried by animals and wagons. It stores well, and burns slowly. And is quite versatile for both large scale power generation, or low tech industrial use and home heating. And unlike natural gas, it can be cheaply transported across oceans. This is why coal, like oil—but unlike natural gas—trades at a converged price globally. Now add to these characteristics the fact that OECD nations, where per capita incomes are higher, continue to raise the price of coal *use* through regulation, and you can see why [coal for export continues to boom](#). Coal remains therefore the energy source for the world's developing nations, and we are only too happy to ship it to them.

Wisely recognizing that coal was the arch-nemesis in the world's energy and climate matrix, Google.org set out in November 2007 to undertake a noble battle: it would challenge the world to create kilowatts of energy from renewable sources more cheaply than from coal. They [named the project appropriately](#): RE<C. At the time, I recall being quite impressed that Google understood the problem so well. Until Solar, Wind or other new sources of power generation cost as little to set up as coal, the developing world would continue to reach hard for its usual cheap BTU. Over the past 18 months I have tried to learn how google.org is progressing. They've not announced any news.

And thus, I return to Asia where despite the addition of Wind, Solar and Hydro the buildout of coal-fired electrical power continues at a furious pace. China alone is expected to build as much coal capacity in the next 10 years as currently exist in all of the US. And that's just China. In this context, I found Earth Day—and the carbon and climate plans of many OECD nations—to be a tad ironic. For it hardly seems like an accomplishment to stop burning the coal here—so that it's even cheaper to burn someplace else.

Happy Earth Day.

-Gregor

Photo: Sebastiao Salgado: *Workers emerging from coal mine, Dhanbad, India, 1989*

**Update:** on Pricing via Jeff DiStanlo: [12,500 BTU per pound for \\$43.70 per ton. In the rail car on CSX railroad in Southern WV.](#)