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# Here Comes the Sun

By **PAUL KRUGMAN**

For decades the story of technology has been dominated, in the popular mind and to a large extent in reality, by computing and the things you can do with it. Moore's Law — in which the price of computing power falls roughly 50 percent every 18 months — has powered an ever-expanding range of applications, from faxes to Facebook.

Our mastery of the material world, on the other hand, has advanced much more slowly. The sources of energy, the way we move stuff around, are much the same as they were a generation ago.

But that may be about to change. We are, or at least we should be, on the cusp of an energy transformation, driven by the rapidly falling cost of solar power. That's right, solar power.

If that surprises you, if you still think of solar power as some kind of hippie fantasy, blame our fossilized political system, in which fossil fuel producers have both powerful political allies and a powerful propaganda machine that denigrates alternatives.

Speaking of propaganda: Before I get to solar, let's talk briefly about hydraulic fracturing, a.k.a. fracking.

Fracking — injecting high-pressure fluid into rocks deep underground, inducing the release of fossil fuels — is an impressive technology. But it's also a technology that imposes large costs on the public. We know that it produces toxic (and radioactive) wastewater that contaminates drinking water; there is reason to suspect, despite industry denials, that it also contaminates groundwater; and the heavy trucking required for fracking inflicts major damage on roads.

Economics 101 tells us that an industry imposing large costs on third parties should be required to "internalize" those costs — that is, to pay for the damage it inflicts, treating that damage as a cost of production. Fracking might still be worth doing given those costs. But no industry should be held harmless from its impacts on the environment and the nation's infrastructure.

Yet what the industry and its defenders demand is, of course, precisely that it be let off the hook for the damage it causes. Why? Because we need that energy! For example, the

industry-backed organization [energyfromshale.org](http://energyfromshale.org) declares that “there are only two sides in the debate: those who want our oil and natural resources developed in a safe and responsible way; and those who don’t want our oil and natural gas resources developed at all.”

So it’s worth pointing out that special treatment for fracking makes a mockery of free-market principles. Pro-fracking politicians claim to be against subsidies, yet letting an industry impose costs without paying compensation is in effect a huge subsidy. They say they oppose having the government “pick winners,” yet they demand special treatment for this industry precisely because they claim it will be a winner.

And now for something completely different: the success story you haven’t heard about.

These days, mention solar power and you’ll probably hear cries of “Solyndra!” Republicans have tried to make the failed solar panel company both a symbol of government waste — although claims of a major scandal are nonsense — and a stick with which to beat renewable energy.

But Solyndra’s failure was actually caused by technological success: the price of solar panels is dropping fast, and Solyndra couldn’t keep up with the competition. In fact, progress in solar panels has been so dramatic and sustained that, as a blog post at *Scientific American* put it, “there’s now frequent talk of a ‘Moore’s law’ in solar energy,” with prices adjusted for inflation falling around 7 percent a year.

This has already led to rapid growth in solar installations, but even more change may be just around the corner. If the downward trend continues — and if anything it seems to be accelerating — we’re just a few years from the point at which electricity from solar panels becomes cheaper than electricity generated by burning coal.

And if we priced coal-fired power right, taking into account the huge health and other costs it imposes, it’s likely that we would already have passed that tipping point.

But will our political system delay the energy transformation now within reach?

Let’s face it: a large part of our political class, including essentially the entire G.O.P., is deeply invested in an energy sector dominated by fossil fuels, and actively hostile to alternatives. This political class will do everything it can to ensure subsidies for the extraction and use of fossil fuels, directly with taxpayers’ money and indirectly by letting the industry off the hook for environmental costs, while ridiculing technologies like solar.

So what you need to know is that nothing you hear from these people is true. Fracking is not a dream come true; solar is now cost-effective. Here comes the sun, if we’re willing to let it in.