In Which I Persuade You That the Energy Transition is Awesome

JULIE REHMEYER

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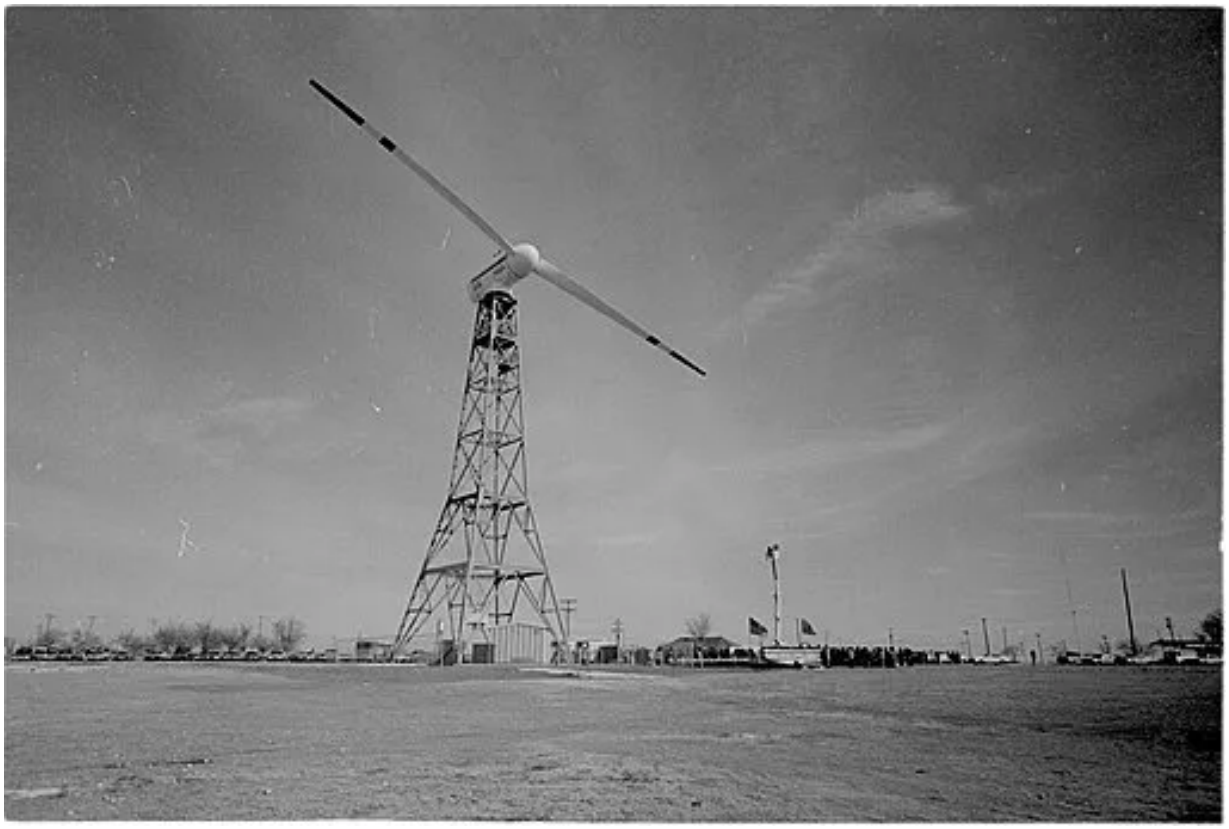

Clayton New Mexico wind turbine dedication, January 1978

So why the heck should you care about New Mexico's clean energy transition

I recognize that, unlike me, you may not care a whit about a dusty, sparsely po
state that barely seems part of the US. And you may only catch news stories ab
energy transition here and there as the torrent of information pours over you.
also feel like you already have quite enough to despair about, thank you very m

This newsletter is for you! Because learning about the energy transition won't
make you more informed — it'll make you more hopeful and empowered. Real

In fact, the biggest reason I love learning about the energy transition is that it
out of the undifferentiated overwhelm that constantly threatens us all these da
vision is genuinely exciting, both because it addresses climate change and bec
technology is just super cool. There's so much to think about and so much to l
— and it's so doable.

To spell this out, let's start with my claim in my introductory post that the ene
transition is unstoppable regardless of what happens in Washington. I'm gues
comes as a surprise to many of you. And if it doesn't, then you probably alread
you care about the energy transition (in which case, you can move along for nc
um, will you first please send this post along to someone who doesn't yet?).

Let me start defending my claim with an appeal to authority. There are many l
pick, but we'll go with John Kerry, former US climate envoy, who said, "The qu
not will we — all of us — come to live in low-carbon, no-carbon economies. W
The question is: Will we get there in time to avoid the worst consequences of t
crisis?"

That might sound almost delusional in these political times. So how on earth c
be true?

Reason 1: Renewables are super cheap

Nothing produces electricity more cheaply than solar and wind, even factorin
cloudy days and calm nights. But to make them most useful, you need to add b
so that they provide steady power whenever you need it. Then they're not vast
cheaper anymore, but even so, in many situations, they're still about as cheap
cheaper than any fossil fuel. And next year, they'll often beat out all fossil fuel
costs fell by 40% in 2024 alone, and solar fell by half in 2023.

Unsurprisingly, then, almost all new sources of electricity added to the grid ar
renewable: Why pay more?

But how can prices be falling that fast, especially year after year after year? Th
to the next reason for the unstoppability of the energy transition:

Reason 2: Scale is magic

Every technological development that has felt like magic has been driven by ir
scale. If you're old enough, you'll remember 200 kilobyte floppy discs — now a
might have four terabytes, more than 20 million times as much. The developm
computers was described by Moore's law: Every couple of years, computers ge
as powerful and cost less. The more computers we build, the better we get at i
the more powerful and cheaper they get.

A similar law, Wright's Law, describes solar and batteries: Each time the worl
produces twice as many of them, they each get around 20% cheaper.

Costs tumble because as we produce more batteries and solar panels, we learn

get more power out of them for less money. And as factories get bigger and bi
reap the rewards of economies of scale. Solar and batteries are perfect for indu
scale: They're modular, factory-made, easy to ship, and plug-and-play on site.
that reason, solar has been outstripping wind lately—those giant turbines are
ship and assemble.

Fossil fuel-based technology can't access this scaling magic. This old technolo
growing like renewables are, so capacity increases aren't triggering big price d
And there's a floor on costs, because you have to keep digging fossil fuels out
ground to burn them up. With renewable energy, once you've built it, your exp
are essentially over.

Reason 3: Electricity can accomplish more and more

EVs let us drive on electricity. Electric heat pumps let us warm our homes. Ele
motors let us power entire factories. We're steadily electrifying more of what u
require fossil fuels. For some tasks — like manufacturing cement or flying airp
we don't have the tech yet to power them without fossil fuels. But we have roa
get there.

Now the challenge is scaling up fast enough that the magic of industrial scale
making everything better and cheaper, fast.

Reason 4: The future is tugging us toward electricity

Fossil fuels kinda suck. They're clumsy, inefficient, dirty, unsafe, and dumb. I
seriously, you have to light them on fire! And then lots of the heat they produc
wasted and noxious gases spew out. You have to work hard just to manage the
messiness of the fuel, with exhaust systems, fuel lines, filters, etc. Plus fossil fu
stupid — they can't talk to software. Let's not even get into how they kill peop
explode, foul the air, and, of course, warm the planet.

Electricity, on the other hand, is elegance itself. It's power wrapped up in an organized, highly usable form. It moves at the speed of light, obeys software, f exactly when and where you want it. You can store it, reverse it, network it, all microseconds, with no smoke or fire or mess.

So if you're designing a new technology, you're going to use electricity. Ever n that all robo-taxis are EVs? They need the precision, efficiency, instant torque operation and digital integration of electricity. Plus, electricity is cheaper. Wh you innovate with a mess like fossil fuels instead?

The future has ruled: We're going electric.

The vision

We're not just putting up some solar panels and wind turbines. We're in the m a reinvention of our entire energy system. The transformation is unimaginably We are changing the way we power our cars, warm our homes, heat our water, our steel, manufacture our cement, fertilize our crops, fly our planes, ship our merchandise, and do nearly everything else. Some of these changes are already underway, others are still taking shape, and a few are just rough sketches, with breakthroughs yet to come.

This reinvention is still malleable, particularly how it treats humans in its path we're paying attention, we can bend it toward justice. And critically, we can he it up, which is essential for reducing future tragedies like the Los Angeles fire Texas flooding.

At every level, there are tasks at hand: reducing the carbon impact of our own decarbonizing our homes for ourselves and their future inhabitants, spreading word to our friends (my personal favorite), influencing local policy decisions, researching new technologies that we need, helping to bring them to market,

them up to the scale of production needed so they become cheap and ubiquito and on and on. That work continues no matter the chaos of politics, and there whole ecosystem of inventive, determined, focused people doing it.

So I hope you'll come along as we explore this transformation and that you'll f own place in it.

If you'd like to learn more about this big vision of the energy transition, I high recommend Bill McKibben's recent piece in the New Yorker.

That still leaves the question: Why New Mexico? (Other than the fact that I ha live here.) The brief answer is that New Mexico provides a particularly fascina on the changes that are happening everywhere, but we'll leave the details of th the next post.

Discussion about this post

Comments Restacks

Write a comment...

Cathy Reisenwitz Sex and the State Aug 12, 2025

Liked by Julie Rehmeyer

Extremely well-written and heartening. Thank you.

1. Won't the tariffs make batteries and other required tech more expensive?

2. What can we do, policywise, to onshore manufacturing to keep factories and techno together and help factories get more efficient more quickly?

LIKED (1) REPLY

2 replies by Julie Rehmeyer and others

Stephanie Weaver Bitter, Sweet: Notes from a hap... Aug 12, 2025

Thanks for this! We put in solar two years ago and right now we're trying to figure out if invest in a heat pump and battery. I want to, but it's still $$.

LIKE REPLY

1 reply by Julie Rehmeyer

4 more comments...