



Dispatches From The Wild, Weird World Of Humanity And Its Biosphere

July 7 2021

## Renewables Revolution

There is an insanely amazing amount of progress happening on renewable energy. As someone who's followed environmental news for the last 10+ years, it's truly astonishing: almost any one of the major developments in the last few weeks would have been the biggest piece of climate action news for the year in, say, 2013. Around the world, countries, subnational divisions, and utilities are making the smart choice to invest in new wind and solar power and accelerate the phase-out of fossil fuels. Key international context for this is that wind and solar power are just getting cheaper and cheaper to install and operate. A new report from the International Renewable Energy Agency found that solar power costs fell by 16% last year and 86% over the last decade, and [two-thirds of new solar and wind projects being built worldwide are cheaper than even the world's cheapest new coal plants](#). Another analysis found that in countries representing 46% of the world's population, [it's cheaper to build a new solar park or wind farm than to keep running an existing coal or gas-fired plant!](#) And it's likely to get even better. After years of having to fight tooth and nail for government investment in renewables (which we still absolutely need lots of, because we need to do this transition ASAP!) the market forces are finally with us.

- **Bangladesh** [announced that it will be scrapping plans for 10 big new coal plants](#) (many of them intended for ecologically fragile coastal regions), and instead will target 40% renewable energy by 2041.
- The **Biden Administration** has [ordered seizure of any imports of polysilicon](#) materials (a major component of solar panels) from Hoshine Silicon Industry, a Chinese company operating in Xinjiang that appears to be using enslaved Uighur labor. No energy transformation is worth accepting slavery in a supply chain, obviously, and even if this seriously set back climate goals it would be worth doing. Fortunately it [looks like we can have it both ways](#), making sure

we're not unintentionally funding China's [genocidal violence](#) and only experiencing short-term solar price bumps, as even before the Biden announcement the US solar industry was [setting up audit and supply chain tracing mechanisms](#) to ensure ethical sourcing of raw materials.

- California's Public Utilities Commission approved a plan that requires utilities to [buy 11.5 gigawatts of new zero-carbon electricity by 2026](#). That's a lot of energy, [enough to power 2.5 million households](#), and will help replace aging nuclear and natural gas plants set to retire in the next few years. Notably, this wasn't even a renewables-focused program: it was just the best option to build capacity and prevent blackouts in the state grid.
- The European Union's epic [European Green Deal](#), a society-wide push to reach no net greenhouse gas emissions by 2050, [officially passed the European Parliament on June 24th](#). The deal had already been agreed to by the major EU players at several points over the past year, so this was not unexpected, but it's still amazing to have it set in stone!
- In Q1 2021, solar and wind power together accounted for *over 99%* of all new electric capacity built in the **United States**, with fossil fuels and all other energy sources accounting for less than 1%. Over 5 gigawatts (direct current) of solar capacity was built in the first quarter of 2021—a 46% increase from the first quarter of 2020. At long last, no one is building new fossil fuel burning power plants in America!
- France saw its [Council of State](#) (essentially a Supreme Court, but ruling only on government actions) [order the French government to take more actions to meet its emissions reduction targets](#) by March 2022, and could issue a fine if it deems such actions insufficient. This joins similar recent rulings in the [Netherlands](#), [Belgium](#), and [Germany](#). Even as Western Europe is broadly moving in the right direction on decarbonization, their legal systems are pushing them to do it even faster, in a refreshing example of major institutions actually acting with the urgency the climate crisis requires!
- The largest power company in India, NTPC (historically a gigantic coal operator) announced in June that it [will build 60 gigawatts of new renewable energy by 2032](#), up from its previous target of 32 gigawatts. This is both great on its own, and a hopeful sign that India's coal fleet may peak and decline sooner than expected! Furthermore, Reliance Energy, India's biggest oil refinery company, announced it [will invest \\$10 billion in four new "gigafactories"](#) building renewables tech from solar panels to electric car batteries to hydrogen fuel cells.
- A plant in Lulea, **Sweden**, run by a three-company, partnership, has [successfully produced "sponge iron," a key ingredient in steel, with a nearly emissions-free process](#) using renewable energy and hydrogen! This is a big step, as the steel industry currently accounts for 7% of global carbon dioxide emissions, and needs some low-carbon solutions.
- A construction site in **Norway's** capital city, Oslo, achieved a world first: [all machinery being used on the site, from excavators to loaders to diggers, is electric](#). This makes it an ultra-low pollution and, mind-bendingly, a *quiet* construction site! In a lovely twist, what they're actually building is a new

pedestrianized plaza to replace a former turning zone for taxis.

- The **Canadian government** [has announced that it will require that only zero-emission cars and light trucks be sold starting in 2035](#), banning new internal combustion engines in these vehicles. This is an excellent policy, reducing both carbon-emissions and ground-level air pollution, that has already been adopted by California and the UK!
- The **UK** has announced that it will [end all coal-fired power generation by October 2024](#), strengthening its previous 2025 target. This is a historic victory: the first coal-fired power plant was built in London in 1882, and by 1950 coal provided 97% of Britain's electricity. It was still at 40% in 2012-[but less than 5%](#) now, and soon all the way to zero!
- **China** appears to be investing much less in coal fired power plants abroad. As of 2014, Chinese companies (all essentially arms of the government to one degree or another) [had financed 52 proposed coal power projects in other countries, raising major climate concerns. Since then, 33 have been shelved or cancelled, only 1 has gone into operation, and no new coal finance proposals were announced in 2020](#). Hopefully this augurs well for China's proposed domestic phase-out of coal!
- And **Maine**, in the wake of its epic [newly passed first-in-the-nation fossil fuel divestment law](#), has passed (and Governor Janet Mills has signed into law!) [LD 528, setting a target of reaching 300 megawatts of energy storage capacity by 2025 and 400 megawatts \(0.4 gigawatts\) by 2030](#). Energy storage, like grid-scale batteries, is a key component of decarbonizing the grid, and this bill (which also includes funding and consumer education programs to promote energy storage!) makes Maine the ninth state to set a target for it!



## Heat Waves

And all of that renewables progress is sorely needed, because we're already getting smacked with the full fury of the climate crisis.

Western North America has been struck by a truly unprecedented heat wave. Early analysis indicates that in a world without the

climate crisis, western North America would likely have seen heatwaves like this [only once in a millennium-or even less frequently](#). Record-high temperatures were



recorded in droves: [116 degrees Fahrenheit in Oregon](#), [109 in Spokane](#), [108 in Seattle](#). [Power cables and streetcar wires melted](#) in Portland, Oregon, while pavement buckled and warped across the Pacific Northwest. Seattle set up [36 municipal cooling centers](#) to offer shelter to the homeless and others overwhelmed by the heat. This level of heat across historically temperate populated areas is [truly unprecedented in human history](#).

Early numbers indicate that the heat wave has [likely killed hundreds](#): the province of British Columbia saw 777 sudden deaths between June 25th and July 1 2021, compared to 232 in same period in 2020 and 179 in the same period in 2016. It's extremely hard to verify that deaths were caused by extreme heat after the fact, as they often manifest as heart or kidney failure, but the spike in deaths during the heat wave is a highly suggestive correlation, and BC's chief coroner [estimates that at least 300 deaths](#) were due to the heat.

One Canadian town in particular exemplified the dangers posed by the extreme heat. On June 29, 2021, the village of [Lytton, British Columbia](#), reached the unbelievable temperature of [49.6 degrees Celsius-over 121 degrees Fahrenheit](#), an all time record for the nation of Canada and hotter than the all-time record in Las Vegas, thousands of miles to the south. The next day, June 30, a wildfire swept in. The community was evacuated with less than an hour's notice, and a local MP [estimated that 90% of structures have burned down](#).

This sort of unprecedented, devastating, out-of-this-world weather event is, ironically, to be expected at this point. As [a study in Nature Climate Change](#) found, [Earth has not experienced a single day of weather unaffected by the climate crisis since 2012](#). For the next few decades at least, there are just going to be more and worse wildfires and heatwaves, stronger hurricanes, and more erratic and violent floods and droughts. The Union of Concerned Scientists has created a [Killer Heat Interactive Tool](#) (at right) to examine likely extreme heat for different regions of the country under different climate scenarios.

As Governor Jay Inslee of Washington State put it (and David Wallace-Wells expounded on in [an excellent essay](#)) we are now living in a climate "permanent emergency." Now we must adapt, help our fellow creatures on this



## [Killer Heat Interactive Tool](#)

How much heat can you endure?  
Our tool shows what to expect in every region of the country.

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planet survive as best we can, and move as fast as possible to stop it getting worse.



## New Ideas in a Wild World

File this one under "Thinking outside the box for conservation in the Anthropocene." The [Mexican wolf](#) is making a comeback, with 186 individuals now living wild on the Arizona-New Mexico border, up from just 50 in 2010. Much of this success was due to an incredibly innovative "wolf pup fostering" program; starting in 2014, [biologists manually placed pups from the 350-wolf captive population in among the new litters of experienced wild wolf](#)



[mothers](#), who quickly adopt, raise, and train the pups as their own. The biologists also routinely sedate and release the wild adults to vaccinate them and change their GPS tracking collars. (Pictured: Mexican wolf M1296 walking off just after receiving vaccinations and a new GPS collar). This is exactly the kind of selfless care that will make it possible for other species to thrive in the Anthropocene!

Norway has [expanded the boundaries of their national park](#) around the far-north Svalbard archipelago by 2,914 square kilometers (more than the land area of Rhode Island!) to encompass the Van Mijen fjord. The Van Mijen fjord is likely to retain sea ice for longer than other fjords in the area as the world warms, making it a critical refuge for ice-dependent Arctic species. The Norwegian government is also working to dismantle disused infrastructure from coal mining on the islands (stopped in 2019!), leaving more space for Svalbard's seals, seabirds, and estimated 3,000 polar bears.

Norway has also [paid the heavily forested Central African nation of Gabon \\$17 million](#), essentially as thanks for the carbon sequestration capacity of their rainforests (covering 88% of Gabon's land), a pioneering payment from a richer country to a poorer one for ecosystem services!

[North Macedonia](#) has joined neighboring Kosovo and Albania to create [adjoining protected areas](#) covering the [Shar Mountains](#), a rich landscape home to brown bear, lynx, chamois, 37 glacial lakes, and 167 species of butterflies. The mountains have been stricken by illegal logging for decades, but will shortly be receiving state and UN support to build up national park protections.

After eight years of legal wrangling, animal rights charity Animals Asia has successfully pulled off an [unprecedented large-scale rescue of 101 moon bears](#), refugees from the barbaric practice of [bear bile harvesting](#), transferring them from a shut-down bile factory to their sanctuary in Chengdu.

Unlike the previous stories, this is at the proposal stage only, but it's so awesome this newsletter just had to include it. The [I-80 bridge over the Mississippi river](#), between Illinois and Iowa, is aging and is set to be demolished and replaced. However, a small team of local conservationists and Native American leaders



are proposing instead to [cover the bridge in soil and grasses and introduce a small herd of bison](#), forming a new, 100-acre national park that would be both Illinois and Iowa's first. (Pictured: CGI rendering of the proposed project). The "[Bison Bridge](#)" proposal is now being seriously considered by both states' departments of transportation. It would likely save money and would certainly be an epic symbol of human-wildlife coexistence!

**The Weekly Anthropocene**

**Contact Us Today**

Email Address:  
samuel.matey@maine.edu

