



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

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Yemen

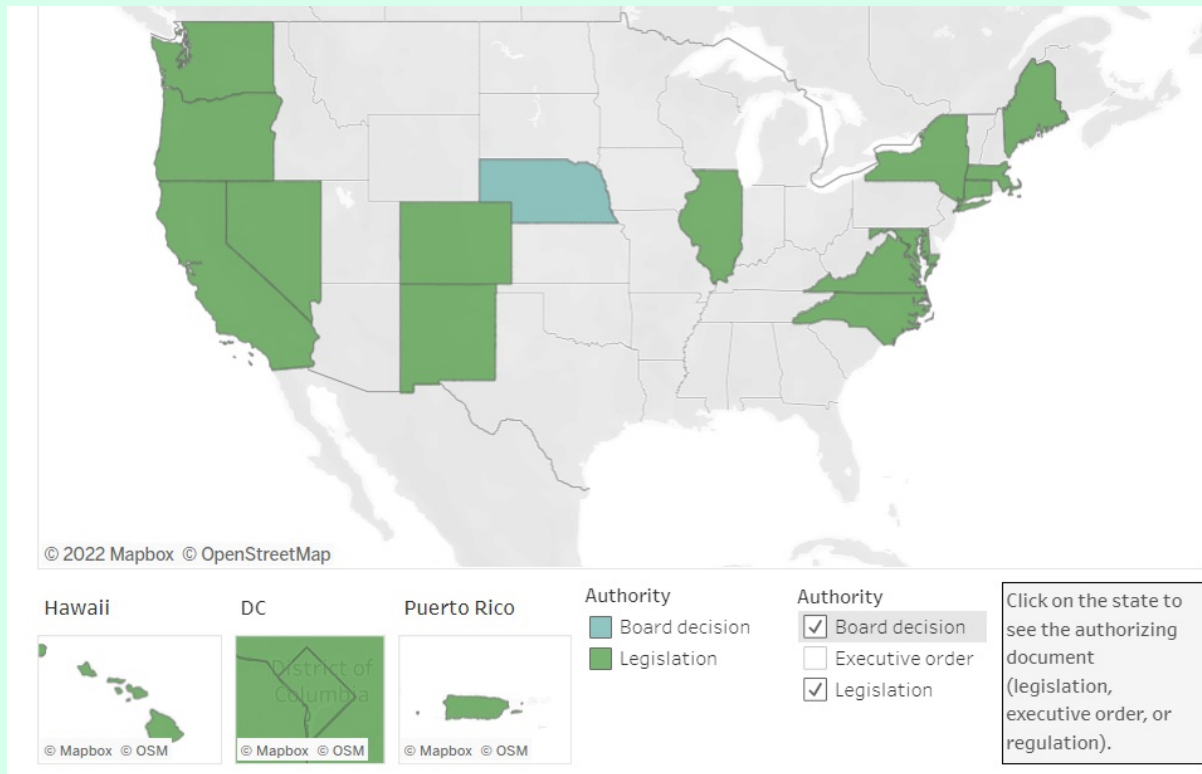


For years, the world has heard warnings about the *FSO Safer* ([pictured](#)), an abandoned, rusting, still-full oil tanker off the coast of war-torn Yemen, and its potential for a catastrophic spill ([previously covered in this newsletter](#)). Now, at long last, the United Nations [has finally reached a deal with the Houthi rebel faction controlling the area for access to offload the oil and ready the ship for salvage](#). They are currently raising money, have chosen the Dutch maritime salvage company that successfully dislodged the *Ever Given* from the Suez Canal to do the work, and hope to start work later in 2022, before winter weather sets in. The *FSO Safer* currently contains four times the amount of oil that was on the *Exxon Valdez*, and if it spilled from the rotting ship, it would devastate Red Sea fishing for a generation, screw up Saudi desalination plants, kill off unique coral reefs, block the ports of an already beleaguered Yemen, and generally be a huge, deadly mess. Let's hope that with this UN effort finally on the way to happening, all goes well!



U.S.

Despite the deeply disappointing *West Virginia vs. EPA* Supreme Court decision limiting the EPA's authorization to regulate greenhouse gases as pollutants ([which won't actually change anything on-the-ground, since such Obama-era regulations never went into effect due to legal challenges](#)), the United States continues to make progress in transitioning from fossil fuels to clean energy, led by forward-thinking state governments.



On June 29th, the Governor of **Rhode Island** [signed into law](#) a bill that committed the Ocean State to the nation's fastest decarbonization timeline. It imposes steadily rising yearly renewables quotas for Rhode Island utilities to meet, culminating in 100% renewable electricity by 2030. This is particularly ambitious since Rhode Island hasn't made much progress on renewables so far: it [received 89% of its electricity from natural gas in 2020](#), the highest of any state. Since Rhode Island is [part of the integrated Regional Greenhouse Gas Initiative with several other Northeastern states, they'll be able to easily buy renewable electricity credits from power generated in neighboring states in an amount equivalent to its total power usage](#). Although similar "credit"-type schemes are often obfuscation for a lack of substantive change, it's legit in this case, as it adds up to the same legal incentive to build enough new renewables to meet Rhode Island's needs fast. R.I. is also part of Biden's new federal-state offshore wind initiative. Great news!

It's also worth putting this progress in context: fifteen states (plus DC and Puerto Rico), [together home to over 40% of Americans](#), have already enacted legislation committing to either 100% renewable electricity or net-zero carbon emissions by 2050 or earlier ([pictured in the map above from the Clean Energy States Alliance](#), which now needs to be updated to include Rhode Island!). Notably, some more states, mostly those with Republican legislatures

but Democratic governors like Michigan and Wisconsin, have set 100% renewables targets with executive orders only, but that has much less legal force. Conservative Nebraska also is committed to net-zero emissions by 2050 through an interesting backdoor approach: [the three publicly-owned utilities that provide all of the state's electricity voted in their own decarbonization targets without the legislature getting involved](#), making it the only Republican-controlled state with such commitments. And, of course, renewables are still booming due to economic factors in states that have enacted no legislation setting 100% targets: for example, wind power provided [57% of Iowa's electricity generation in 2020, up from 41% in 2019 and 5% in 2006](#).

It's worth remembering that the first state to commit to 100% renewables was [Hawaii in 2015](#): extraordinary progress has been made in just seven years! Imagine what the American energy landscape will look like by 2030.

California just passed the strongest law in American history dedicated to fighting plastics pollution. The Plastic Pollution Producer Responsibility Act [mandates a 25% reduction](#) (in both weight and number of items, whichever is larger) in single-use plastic packaging and "foodware" (plastic spoons, bowls, etc.), plus an increase in plastic recycling rates up to 65%, by 2032. It [also mandates](#) that plastics companies pay \$500 million to a pollution mitigation fund every year for the next ten years, and that all single-use packaging and foodware sold in California, plastic or not, must be recyclable or compostable by 2032.

The California Air Regulation Board has also previously set new regulations [mandating and incentivizing more electric trucks](#) for "drayage," heavy-duty port transfer, that are expected expand America's fleet of **zero-emission heavy-duty trucks** 45-fold in the coming few years. This will also phase out polluting diesel engines that have [caused heavy air pollution](#) in Southern California neighborhoods near ports. The Golden State also has longer-term regulatory standards: by 2045, every new truck sold in California, for any purpose, will need to be zero-emission.

For context on what business and industry are expecting from electric vehicles these days, the **CEO of ExxonMobil** recently said in an interview that [he expects every new passenger car sold in the world to be an EV by 2040](#), and when that time comes expects the business to pivot to making plastics. As amoral as fossil fuel execs may be, they pay attention to economic and technological trends, and they know which way things are going.



Climate Impacts

A startup called [Terviva](#) is currently growing 1,500 acres of *Pongamia pinnata*, the [Pongame oiltree \(depicted\)](#), a Southeast Asian tree with oil and protein-



rich beans that could serve as a "miracle" crop for the Anthropocene. While its oil was used for lubricant, varnish, and lamp oil in India for centuries, and its seeds are used in some modern antifungal medicines, *Pongamia* was long overlooked for agriculture because its fruits have an unpalatable bitter taste. However, its time may have come. *Pongamia* trees are heat-tolerant, drought-tolerant, flourish in poor and arid soil, sequester carbon, [fix their own nitrogen from the air](#) (a big plus, this, meaning it won't need fertilizer), and in test fields are producing bean yields 4 to 10 times higher than soybean fields. [Terviva has sped along their domestication, identified an](#)

[alcohol solvent that de-bitters the beans, sequenced the species' genome to breed super-yielding trees](#), and is now partnering with food giant Danone to develop *Pongamia* as an alternative to soy and palm oil. Branded as "Ponova" oil, the first products should be coming to the market in 2023!

While *Pongamia* cultivation is tiny right now, there's incredible room for this high-yield, highly sustainable crop to grow its market share. Great news!

The climate change-boosted floods that recently swept **Yellowstone National Park** and led to some closures for tourists may soon lead to a huge resurgence in new cottonwood tree growth and Yellowstone cutthroat trout spawning. Officials are discussing moving a flood-damaged road to higher ground to leave more space for untrammelled river movements. With clever land management, the climactic turbulence of the Anthropocene can become an opportunity to give more space to natural ecosystems. [For more, check out the full National Geographic article.](#)

A [new paper in Nature Climate Change](#) shed more light on the complicated interactions between **climate change and tropical cyclones**, the class of storms also known as hurricanes, typhoons, and cyclonic storms. Increasing sea temperatures give forming cyclones more thermal energy to draw on, making stronger storms-but climate change is also [destabilizing and weakening the Walker and Hadley atmospheric circulation patterns](#), reducing the mixing of air across different altitudes and making it harder for new cyclones to form in the first place. As climate scientists have predicted, we are seeing fewer but stronger storms-not as bad as it could have been.