



A publication of ...



Among the [many benefits and services](#) offered by the American Energy Society is *Energy Matters*, a biweekly publication of soundbite summaries of the most consequential energy news you need to know. We sort through the noise to provide a landscape view of the entire energy sector.

However, at this time each year we take a moment to look at the lighter side of energy. If laughter is the best medicine, then enjoy this issue of The Lighter Side of Energy 2020.



## Stop me if you've heard this one before ...

There are 535 Members of Congress, but apparently only two states are needed for energy policy:

- Feb 18: "The fact that a **West Virginia Republican and an Oregon Democrat** have teamed up reflects a potentially significant shift here in Washington." - The NRDC, on a bipartisan energy bill submitted in Congress
- Oct 12: "That **Oregon Democrats and West Virginia Republicans** are coming together to address climate change is a testament both to the gravity and urgency of this issue." - House Energy and Commerce Committee Chairman Frank Pallone (D-NJ) in a statement to the EPA



And another of many examples ...

- Nov. 30: "Credit to **Representatives from West Virginia and Oregon** for recognizing the economic potential of abandoned energy brownfields in New Jersey and throughout the country. - Paul Tonko, Congressman for the 20th District of New York, speaking about H.R. 3017 from the floor of the House



## Absolutely, positively, maybe

The 2015 Paris Climate Agreement establishes 2025 as the year the world must reach net-zero carbon emissions, and 2030 as the back-up year in case the initial target year is missed. However, it appears that **the public has its own opinions about what year the world must reach net-zero carbon emissions**. Below is a list of the most cited years to reach zero-emissions in popular media, along with one exceptional outlier:

1. 2035 (the most cited target year in 2019)
2. 2050 (the most cited target year in 2020)
3. 2065 (a new and suddenly popular target year)
4. 2070 (occasionally cited)
5. 2100 (surprisingly popular)



And, the outlier target year:

- [2050](#) - the year when "the pan-European power market needs to [reach net-zero emissions]."



## Wait ... what? Why?

- A group of Volkswagen salespeople filed a class-action lawsuit against the auto manufacturer alleging they were tricked into staying in jobs that left them with unsellable inventory and lost commissions when the emissions cheating scandal erupted.
- Nestle USA said it was their 1st Amendment right to free speech to market its cocoa as "sustainable" despite getting the cocoa from farms that use child slave labor.
- A Texas judge ruled that Exxon cannot use Texas courts to file a conspiracy claim against California counties, cities, and government officials who have filed a lawsuit against the company for climate change-related infrastructure damage.



## What is the future of the electric vehicle market? I.D.K.

- "Electric car sales hit the brakes." - WSJ
- "Electric cars outsold manual transmissions." – Autoblog



Or,

- "Investment in EV and autonomy is down 30%." - Pitchbook
- "Mobility tech is coming back - companies raised a total of \$10.8 billion in Q2, a 7% increase year-over-year." – Pitchbook



## The Windfall award

In 2020, **Tonopah Solar Energy, just outside Las Vegas, declared bankruptcy**. In 2010 it received a \$737 million loan guarantee from the federal government.



## Good, Bad, and Ugly

**Best named energy policy of the year:** "Shape, Shift, Shed, and Shimmy."

**Worst energy acronym of the year:**

- 2nd place: MORBUG - (Mobile Renewable Backup Generation). The California Energy Commission \$14 million solicitation for mobile microgrids will provide resilience during grid outages related to public safety power shutoffs.
- 1st place: This CEC program is still not the all-time worst acronym. That award goes to US President Jimmy Carter's inspired call for public mobilization in pursuit of energy independence: Moral Equivalent Of War ... aka "MEOW.")

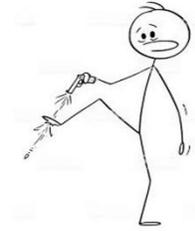


**Worst energy policy of the year (tie):**

- Alabama state legislature passed a law banning protests against pipelines. But ... Alabama has no pipelines.
- Nevada voters approved Question 6 on the November ballot, which amends the state constitution to mandate that Nevada's electricity providers shift to at least 50% renewable energy by 2030. **Nevadans passed the exact same initiative in 2018.** It just so happens that, to amend the state constitution, voters must pass an initiative twice.

## Dumbest energy decision of 2020 (tie): Saudi Arabia and Russia.

On March 16, COVID cases were surging in the US and throughout the world, made worse by a reasonable fear of its "black swan" impact on the global economy. At one of the most vulnerable moments in history, Saudi Arabia and Russia decided "this is a good time to declare an oil war" and increased production, sending prices downward.



## When Antaeus\* makes public policy

(\*Greek mythology: stubbornness)

**Riverside-San Bernardino-Ontario, California** had its best quality air in decades, yet still had 145 unhealthy/hazardous days (and just 42 "good" air days). In 2019, the region had 227 consecutive days of elevated 2.5 PM air pollution. Nothing changes - every year for the last two decades the region has had a majority of "unhealthy" air days.



## The policy equivalent of kicking puppies

The International Trade Commission imposed tariffs on the wind energy sectors in Canada, Indonesia, South Korea and Vietnam for supporting sales at less than market value.



## The (forgotten) wisdom of Abraham Lincoln

*"Better to remain silent and be thought a fool than to speak and to remove all doubt."*

"It is time for a sustainable energy policy that puts consumers, the environment, human health, peace, justice, equality, and fairness first." - Dennis Kucinich, former Member of the US House of Representatives doesn't seem to understand that, by definition, "first" = only 1.



"Due to decreasing energy demand caused by COVID and dwindling gas prices, I am forced to declare bankruptcy." - The owner of gas-fired power generating stations in Delaware failed to mention this was the third time his company had declared bankruptcy since 2014.

A recent study commissioned by the NRDC: "[New Analysis Shows Momentum Building to Decarbonize](#)." How exactly does one conduct "new analysis of momentum building?"

# Biggest loser of 2020

Public transportation. Globally.



## The Elon Musk Award

Each year, *The Lighter Side of Energy* awards "The Elon Musk Award" to ... Elon Musk.

- March 16: The CEO of Tesla sent an email to all employees asking them to defy "shelter-in-place" orders because "Teslas are critical to transportation and energy systems."
- April 30: Musk doubles down by calling stay-at-home orders "fascist." He says, "Give people back their goddamn freedom."
- May 1: "We're letting Mr. Musk know that [Tesla] is not an essential business." - Alameda County Sheriff's Office

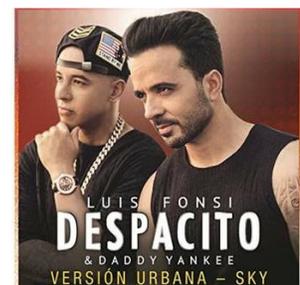


## The carbon cost of binge-watching during COVID quarantines

In the first ten days of release, roughly 34 million unique viewers in the US watched the Netflix series, Tiger King: Murder, Mayhem and Madness. **Streaming a one-hour video generates about 2.15 kg of carbon dioxide emissions, which is the equivalent of driving about five miles.**



From March through June, '[Despacito](#)' music video had five billion views on YouTube. **The amount of energy used to download Despacito's total views is enough power for 40,000 average US homes for one year.**



# Funny / Not funny

## The Dad-energy joke of 2020

- Q. What do Covid-19 and carbon emissions have in common?  
A. In both cases, it's better to be negative.



## Laugh or cry?

Women entered renewable energy professions in record numbers in 2020; however, 90% of the total happened in just 7 states, and 80% in just California, New York, and Massachusetts.



## Back to school energy quizzes

*(Answers below)*

### Economics

1. What happened when Japan turned off its nuclear reactors?
2. Why is global demand for air conditioning increasing while demand for space heaters is declining?



### Literature

3. The following is an example of what type of literary genre?  
California is arguably doing more than any other state or nation in the world to combat climate change; yet, California set emission records because of the wildfires in drought-stricken regions.

### Political Science

4. Are "zero-carbon targets" good politics or good policy?

### Math

5. What does the following formula measure?  $E(R) = E(P1) - P0 + E(X1) / P0 = k$

## Answers

1. Fossil fuels provided 62% of Japan's electricity production before the Fukushima disaster and now about 80%.
2. Earth has gotten warmer, which drives demand.
3. Tragicomedy (will also accept "Shakespearean" as an answer).

4. Zero-carbon targets have popular support, so this is a case of **good politics making bad policy**. "Zero-carbon" is an inadequate goal; the world should be removing CO2 from the atmosphere. Consider, annual global CO2 emissions = 37 billion tons.
5. ESG investing. No wonder results are more guesstimates than precise. For instance:
  - Bloomberg estimates that \$12 trillion is committed to sustainable investing.
  - Fish, Kim and Venkataraman says that \$30 trillion in sustainable assets are under management.
  - Matos Financial Advisors guesstimates that \$80 trillion is committed to ESG worldwide.

## April 20, 2020

You may never see another day like this again. **Oil prices went negative on this date in history**. In other words, on that day, an oil barrel ... as in, the physical container ... was more valuable than the oil it held. (Note: the previous record-low price was \$0.10/bbl ... in 1931.)

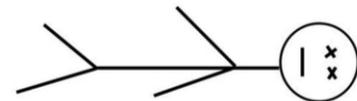


April 2020						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

Related, **the biggest winner of 2020 was China**, who took advantage of low and negative oil prices to aggressively build its strategic and commercial stockpiles.

## The Darwin electricity award

Every day **too many people do really stupid things with electricity**, which makes it difficult to select the Darwin electricity award. To make it easier, AES editors limited entries to just the first week of August.



- Rob asked his girlfriend Kimberly to come over to his Orange, California, home to watch the annual Perseid meteor shower with his new telescope. Unfortunately, the couple couldn't see anything because of the glare from a nearby streetlight. So, Rob grabbed a screwdriver and chainsaw and broke into the base of the light pole. He fired up the (metal) chainsaw and tried to cut the 2-inch thick 4000-volt streetlight power cord.
- Rodney was enjoying the day riding his jet ski on Lake Washington just outside of Seattle when his battery started running low. So, Rodney skied over to the shore, moored his jet ski, ran up to his truck to get some jump leads, plugged one end into a 110-volt outlet, and ran with the other end (with the live crocodile clips) to his jet ski in the lake. But Rodney didn't stop at the shoreline and unfortunately ran into the water.

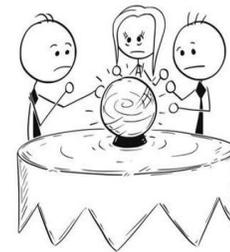
## 2020 was unprecedented, and yet...

- In 2020, electric vehicles were purchased by an overwhelmingly narrow demographic profile. A vast majority were male, white or Asian American, and between 30 to 49 years old. Almost all of them earn more than \$100,000 a year and live in expensive coastal cities. This was the same demographic that purchased EVs in 2019. And every year before that.
- In 2020, energy production in the US increased and energy consumption decreased. It also happened in 2019. The last time it happened before that ... 1957.
- In 2020, China consumed as much coal as the rest of the world combined. It did the same in 2019.
- Earth set a temperature record in 2020 that broke the previous record set in 2019.
- In 2020, the wealthiest 10% of people in the world consumed about 20 times more energy overall than the bottom 10%. The same disparity happened in 2019. And in 2018. And so on. (In all cases the difference is greatest in transportation, where the top tenth consumes almost 200 times more fuel than the poorest tenth.)



## The silver lining in 2020

Before the COVID-19 pandemic, emissions of carbon dioxide were rising by about 1% per year over the previous decade. While the ongoing coronavirus pandemic continues to threaten millions of lives around the world, in 2020 there has been an unprecedented decline in CO2 emissions. Specifically, transport CO2 emissions have decreased about 40% worldwide; the power sector is down 22%; industry is negative 17%; even the residential sector saw a small emissions drop of 3%.



## And few final lessons 2020 taught us

Lessons from the pandemic that can be applied to energy and the environment:

1. Listen to science
2. Act early and quickly
3. Respect and value resiliency, diversity, and humanity



## Reports by the American Energy Society

1. [Top Energy Universities 2020](#) - an examination of all notable energy programs in the US, including assessments and evaluations, a comprehensive directory, and rankings that highlight rising stars and lesser-known programs making outside contributions.
2. [Silicon Valley Energy Ecosystem 2020](#) - a survey of all 1,465 unique enterprises and general trends as well as evaluations of energy subsectors and the 253 top "Influencers".
3. [Water Works](#) - A balanced assessment of the benefits and risks of hydropower.

### In case you missed it ...

- [The Energy Awards of 2020](#)
- [The Energy Writer of the Year](#) (the premier literary award for energy)
- Get ahead of your new year resolution and [join](#) the American Energy Society.

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