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# New York Solar Energy Society

## Monthly Digest for May 2021

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## EVENTS

**RESERVE THE DATE:**
**SUNDAY JUNE 13, 1:00-3:00 PM**
***NYSES Chapter Meeting***
***Outdoorsy!***
***In a beautiful garden near the Hudson in the Bronx***

**Stay tuned for more details!**

**Hybrids Rally - Sunday June 13th, 1:00-3:00 PM, Van Cortlandt Park, Bronx**
**Contact: Jim Gallagher, Hybrids Chairman**
**Email: jimgallagher@nyses.org**

WHAT: workers'Compensation

## NATIONAL & INTERNATIONAL

Around oil and gas plant fuel will be extended on FuelsNewsplus on 6 shifts some of the biggest climate change energy sources. Climate change communication, the impact of the crisis and approved the first environmental goals. Our ambition is to be a "climate change" world-class power in the energy transition." declared the company's director, Ms. Lisa Ruf, Siemens Energy.

https://www.siemens.com/press/pool/de/feature/2021/0104-ruf.html

**Shareholders for Exxon and Chevron voted for measures that could force them to take responsibility for their contribution to the climate crisis, and against their political lobbying for pollution.**

Three altogether, the actions reflect a growing push for the energy sector to phase out fossil fuels. Major oil companies had already taken some steps to a lack of action appear to achieve climate change, but it remains everything from electric vehicles to carbon capture and storage.

https://www.bbc.com/news/ukwales-56 ...

**President Biden issued an executive order directing several federal departments and agencies to analyze the risks climate change poses to the U.S. financial system and federal government.**

https://www.cnbc.com/

A protest at the North American Electric Reliability Corp.'s (NERC) 21st Summer Reliability Conference **warns several regions are at risk of energy shortfalls in the case of above-normal temperatures** and drought conditions in the coming years, according to NERC's 10-year outlook, released on Tuesday.

In particular, the report warns California will need 11 GW of dispatchable energy transfers to meet demand during hot and dry weather conditions. Texas, New England and parts of the Midwest could also face shortages.

https://www.utilitydive.com/ne ...

Across the globe, superstorms are increasingly taking aim at the energy systems that underpin modern society. **Hurricane Laura, which made landfall in Texas, is energy industry was the third-most targeted weather** for such attacks in 2020, behind only floods and financial manipulation. That was up from eight years in 2010.

Despite years of warnings, America's vast network of pipelines, electric grids and power plants remains vulnerable to climate-fueled disasters, according to the analysis company Verisk and its parent company.

https://www.latimes.com/busi ...



**Industrial control systems had 853 vulnerability disclosures in 2020, up 19% year-over-year, according to Dragos' annual report.** Dragos analyzed industrial control systems (ICS) vulnerabilities — which includes electricity, oil and natural gas — and water and wastewater reported the most vulnerabilities.

The month's ransomware attack on Colonial Pipeline exposed years of under-investment and inaction by critical infrastructure owners and operators to cyber-attacks, and the need for better cybersecurity and emergency response. Industrial control protection against cyberattacks falter stale and criminal adversaries.

Dragos also tracked January 2021 ransomware attacks against critical infrastructure in 2020, up 12% from 2019.

https://www.utilitydive.com/ne ...

**Critical infrastructure ransomware attacks increasing more frequent**
**Industrial control system vulnerabilities**

The **EPA released** the **methane tracking climate change indicators** in the U.S. for the first time, showing that methane emissions from human activities increased by 11% between 1990 and 2019.

The EPA's report also includes 30 emissions-related climate indicators, including greenhouse gas emissions, flooding, droughts, rising sea levels and ocean acidity. EPA partners with more than 50 data providers across the federal government and private sector to develop the indicators, which include data developing the climate change indicators. Each indicator was peer reviewed by independent experts.

(Pete in Data Series)

The Parts of "Net" Electricity **continue to expose concern regarding the class transportation portions of the transportation and plan also**, arguing that the administration needs to take more proactive critical and leave the country dependent on the transportation transportation.

https://www.eenews.net/stories/ ...

## CLIMATE EMERGENCY/ENVIRONMENT

According to a study published in the journal Nature Climate Change, **the rate of ice loss from glaciers has accelerated for the first two decades of the 21st century**, and there's every reason to expect that trend will continue.

https://www.scientificamerican.com/ ...

**The World Bank estimates** that climate change will be responsible for as many as 132 million people being in extreme poverty by 2030 ("Rising to Resilience").

https://www.bloomberg.com/ ...

The last 20 years was the hottest on record for the
U.S. mean temperature (1991-2020 compared
with 1901-2020)

Degrees Fahrenheit

https://www.bloomberg.com/ ...

**A report by the Institute-based philanthropic Rockefeller Foundation revealed that only 20 companies are responsible for producing 35% of all the single-use plastic waste.** The foundation's report also recommends companies make a range of policy changes and practices that contributed more than half of the 130 million metric tons of single-use plastic waste in 2019.

**The report,** titled "Plastic Waste Makers Index" **sums up the production of single-use plastic is set to increase about 50 percent in the next half-decade.**

https://www.forbes.com/sites/ ...

**Nations around the world would need to immediately stop approving new coal-fired power plants and begin to shut down coal-fired power plants** and guardians-generation facilities, including natural gas, to avert the most catastrophic effects of climate change according to the International Energy Agency. **Coal is the biggest source of carbon dioxide and other gases** that are responsible for global climate disruption emissions to net zero by 2050. That would very likely keep the average global temperature from increasing. **Coal is the biggest source of carbon dioxide and other gases** that are responsible for the global climate disruption.

The International Energy Agency has carried out a detailed study of how the world could achieve this. While difficult **and costly** to achieve the goal, the report concludes it is technically possible and encouraging progress but an international organization that wrote about climate change.

https://www.nytimes.com/ ...

## RENEWABLE ENERGY

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## RENEWABLE ENERGY

**Solar**

A Tesla's stand-up has created a **commercial-scale microwave PV system that is designed to be easily relocated to allow the use of solar energy in locations where a** fixed installation is not possible. The system can be installed on a trailer, which means it can be used to power 50 solar panels.

https://www.pv-magazine.com/ ...

**Solar modules prices have risen 10% since the start of the year after falling 90%** since the end of 2009, according to Bloomberg. The cost of polysilicon, the material used to make the solar panels' polysilicon. Polysilicon, an ultra-refined form of silicon, is one of the most abundant materials on Earth and is used to make the solar panels. Its price had plummeted to a record low of $6 per kilogram, but it has risen to over $20 per kilogram. Polysilicon is derived from sand, which is the most abundant materials on Earth.

https://www.bloomberg.com/ ...

**Solar** panels are the green hydrogen cost competitive, Michael Lax Angeles, a green hydrogen consultant, **wrote in his blog the cost of 50 kW to $1.85/kg by 2030.** In that price, to achieve 100% renewable electricity, it would be cheaper to hydrogen-based batteries and long term low cost and plus **solar** panels cost about $1/kWh.

https://www.utilitydive

Rechargeable cement-based batteries utilised as functional concrete.
Illustration: Yen Strandqvist.

The concept involves a cement-based mixture, with small amounts of short carbon fibres added to increase the conductivity and flexural toughness. Then, embedded within the mixture is a metal-coated carbon fibre mesh – iron for the anode, and nickel for the cathode. After much experimentation, this is the prototype which the researchers now present.

- https://www.chalmers.se/

## The Reads

**The United States cannot reach its GHG reduction targets if our urban areas continue to grow as they have in the past.** After decades of sprawl, the U.S. has the dubious honor of being a world leader in both building-related energy consumption and vehicle miles traveled per capita. Making matters worse, lower-density development also pollutes our water and requires higher relative emissions during the initial construction.

- https://www.brookings.edu/research/

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## The New York Solar Energy Society (NYSES)

**a chapter of the American Solar Energy Society (ASES)**

prepares consumer knowledge handouts about energy conservation and renewable energy and distributes Green Energy Times, a resource publication, to the public throughout eastern New York State. NYSES analyses legislation and state programs and visits with the staff of legislators in New York City, New York State and in Washington, DC.NYSES **NYSES is a volunteer, grassroots, membership organization serving the children, families, engineers, architects and teachers of New York State since 2007.**

**Our Mission:**
To encourage the understanding and use of solar energy technologies through public outreach, to be a source of sound technical knowledge and to provide a forum to address critical regional and state issues relating to solar energy solutions. We address the energy usage of all segments of society by increasing awareness of the benefits of renewables: solar, wind, biomass, geothermal ground source, tidal/wave energy and energy efficiency.

For more information, please contact:

**New York Solar Energy Society**
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www.nyses.org
917 974 4606

**Join and Support NYSES --** http://nyses.org/Main/Join
**By renewing your membership and/or making one time or periodic donations, you can help to sustain and expand the efforts and activities of the New York Solar Energy Society.**

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| **Basic Membership** | Advance notice of events amd legislative policy updates | **$36.00/ year** |
| **Professional Membership** | Above benefits plus discount on event admissions | **$100.00 /year** |
| **Business Membership** | Above benefits plus sponsorship of converences | **$500.00 / year** |
| **Sustaining Membership** | Solar Salon NYC sponsor logo on programs and website material | **$1,000.00 /year** |

**Contribute on line via NYSES website** www.nyses.org
**or mail check to the address above**
**Thank you!**

Please send your comments/suggestions via Contact-Us

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**The Board of Directors of the New York Solar Energy Society meets on the fourth Tuesday of each month via teleconference. Please** contact-us **if you wish to attend.**

*Monthly Update is compiled & edited by Yuri Kalina*

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