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TERRA FIRMA

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CAN WE STILL BE ENVIRONMENTAL ACTIVISTS DESPITE COVID-19?

By Gale Pisha

It seems impossible to overstate how much life has changed here in New York State and the world as a result of the coronavirus pandemic. In addition to the grave impacts on people's health and on countries' healthcare systems, workers who have the least resources to ride out the emergency are being laid off or asked to work on the front lines of caring for the sick and supplying essentials, including food and medical equipment. Rarely is it so clear how deeply we depend on each other to act for a greater common good as we balance the need for social distancing with the necessity for critical services.

From Physical to Virtual

During such a widespread crisis, Sierra Club has taken actions to protect volunteers, staff and our communities. On March 12, more than a week before Governor Cuomo issued a directive for non-essential businesses to close, the Sierra Club's Executive Director Mike Brune instructed all nonessential staff and volunteers to work from home. All Sierra Club planned events of any size for that period were suspended, and the Outings program was drawn down, in an attempt to keep communities safe by limiting in-person contact.

Sierra Club in New York

The Atlantic Chapter had been in the middle of working to make sure our environmental priorities were included in the NYS budget through meetings with legislators and their staff, both in Albany and in their districts. That all came to a halt as the governor and members of the legislature had to turn to crisis management and a looming \$15 billion deficit, while some legislators and their staff members started testing positive for the virus. Our chapter and national staff continued to stay virtually connected with legislative staff and coalition partners to try to keep environmental priorities

in the budget, and we asked our activists to tread softly when speaking on the telephone to their legislators or staff, taking into consideration that these folks are also under stress, possibly from worrying about the health of a loved one or from trying to carry on in the face of such unprecedented difficulties.

Sierra Club Lower Hudson Group

At press time it is not at all clear how long we will need to continue with these work-from-home and social distancing requirements to avoid the spread of the virus and not overwhelm our healthcare facilities. We in the Lower Hudson Group are using this time to stay in touch with our members and coalition partners and to redesign our website (SierraLowerHudson.org) to include more informative articles for thoughtful reading rather than emphasize events which we cannot have. We are joining many others in exploring ways to meet virtually, so check the website for updates and join a virtual meeting if you can. There are also links on our website to national Sierra Club news, and we are working to share information through Facebook and Twitter. We have exciting plans to revitalize our Outings program once we can safely meet again.

Our hope is that you stay safe and healthy and that we emerge from this health crisis soon, with a better grasp of priorities for our planet and the political will to accomplish what needs to be done. Additionally, we ask all members to show up for our families, friends, colleagues, to reach out and be better citizens. This reaching out should include our fellow environmental, political and social justice groups. Get more engaged with our communities.

In addition to wearing many hats in Lower Hudson Group, the author co-chairs the Atlantic Chapter Legislative Committee.

Membership Meeting Schedule

Visit SierraLowerHudson.org > Events

Visit RocklandSierraClub.org

Join us to work on environmental issues in Rockland County!

Rockland Sierra Club was one of the groups leading the successful effort to defeat plans to desalinate Hudson River water for Rockland's drinking water. We are now helping the County craft a sustainable water management policy. We are also working to limit new fossil fuel infrastructure such as Pilgrim crude oil pipelines, and have partnered with 350.org on efforts to address climate change through divestment and through promoting Climate Smart/Clean Energy Communities programs for towns and villages.

Rockland Sierra Club usually meets during the first week of each month. Check RocklandSierraClub.org for dates and locations. For more information: pkurtz9@gmail.com or deby1012@gmail.com. Or call 845-709-0802.

Harvest Square Dance 2020: Virtual Event!

Due to the COVID-19 pandemic, we are transforming the Lower Hudson Group's annual Harvest Square Dance and fundraiser into a virtual event.

This event will be a lot of fun for all and will include an online raffle, so you will still have the opportunity to win a luxurious alpaca throw!

Thank you for your support over the years in general, and for your support of the Harvest Square Dance in particular. The dance raises a significant chunk of our group's annual budget, to support the local work we do to protect the environment.

We will provide details and scheduling on our group's website SierraLowerHudson.org.



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CROTON TACKLES CARBON

By Liam Robb O'Hagan

The residents of Croton-on-Hudson are organizing to define and achieve the carbon reductions required to meet the goal of capping climate change at a level of 1.5°C temperature rise. Key to this effort is the development of a Carbon Tracker to help residents measure their progress.

The Croton100 initiative was launched before an audience of over 200 residents on Saturday, February 29th. The goal is to make Croton carbon emission free--zero emissions by 2040. A 100% reduction can be achieved through five percent cuts in fossil fuel greenhouse gas emissions annually.

In his keynote address, local renewable energy entrepreneur Chandu Visweswariah outlined the challenge, presented solutions and called all the residents to take action.

He compared the risks associated with increasing global temperatures to a roulette wheel, vividly demonstrating risks of a catastrophic loss at a 2°C increase that are much greater than at 1.5°C with a colorful probability sphere.

Visweswariah then called on the residents to look at the ways they can reduce their carbon footprints. This will be hard and require mind shifts that are rapid, far-reaching and unprecedented.

He discussed how residents can make reductions by focusing on the energy intensive items like transport, heating and electricity as well as day-to-day goals in the areas of food, waste and goods and services. For each category he outlined tangible steps to achieve the goals: Replacing your SUV with a smaller sedan or plug-in hybrid and eventually an electric vehicle, or installing a heat pump when your furnace needs replacing. Other important steps include eating less red meat and buying less stuff. He emphasized these changes will improve your health and save you money in the long term.

Visweswariah introduced the Carbon Tracker app that Croton100 has developed with the help of local tech guru Matthew Rubenstein, so people can measure and quantify their carbon reductions. The theory is you can't change what you can't see and giving ordinary people a way to measure their progress is necessary to get them to decarbonize.

A powerful theme in his presentation was an emphasis on personal responsibility. Government has a role, but the message was that the people pull the politicians and there are changes we have to make for which we don't have to rely on anyone else.

Afterward, Emmy Award-winning local actress and event MC Jennifer Jiles called 11 local residents to the stage to celebrate the steps they had taken to reduce their carbon footprints and to introduce the Decarbonizer Bunny, the movement's mascot.

There were addresses from Croton-on-Hudson Mayor Brian Pugh, who discussed the impact of zoning laws on carbon budgets; Westchester County Executive George Latimer, who outlined the steps the county has taken to support non-carbon infrastructure but repeatedly acknowledged that these were not enough; and Assemblywoman Sandy Galef, who discussed a number of initiatives at the state level.

Donovan Gordon from NYSERDA, the New York State Energy Research and Development Authority, discussed the steps the state is taking to achieve its decarbonization goals and how they can support the efforts of individual citizens.

Attendees left with a renewed sense of purpose to decarbonize their lives with the help of awareness, knowledge and a carbon tracking app from Croton100, all of which are available from the website croton100.org.



Sources:

[Chandu Visweswariah](https://www.linkedin.com/in/chandu-visweswariah-998281125) - <https://www.linkedin.com/in/chandu-visweswariah-998281125>

[Carbon Tracker](https://croton100.org/carbon-tracker) - <https://croton100.org/carbon-tracker>

[NYSERDA](https://www.nyscrda.ny.gov/) - <https://www.nyscrda.ny.gov/>

THE NEW YORK STATE ELECTRIC GRID - PART 4

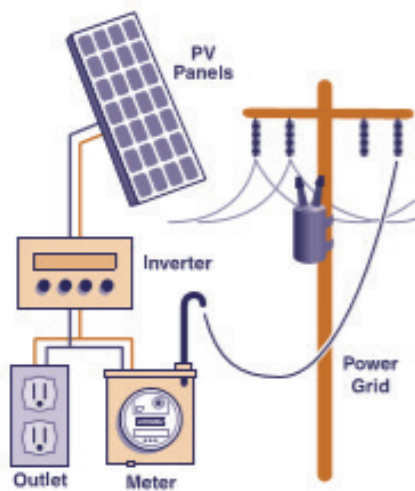
by Laura Burkhardt

Solar Energy to Your Home: Rooftop Panels, Community Solar Farms, et al.

Powering the home with solar-generated electricity is one way many people can increase the use of renewable resources. In this article we describe different ways this can be done.

Rooftop Solar.

Installing solar panels on the roof of a home is a very common way of using the sun to generate electricity. The diagram below shows photovoltaic (PV) solar panels that would be on a roof connected to the house electrical system and to the grid.



Source: <https://www.nrel.gov/docs/fy02osti/31687.pdf>

Since the production of electricity varies according to amount of sunlight available at any particular time, there may be times when more electricity is being generated than is needed by the home. In this situation the excess electricity is pushed back to the grid, and the local utility credits the homeowner's account. In the opposite situation where the home is consuming more electricity than is being produced, electricity from the grid makes up the difference and the utility uses any accrued credits as payment. This system is called **net metering**. The electricity generated by the solar panels and used by the home directly is referred to as **behind-the-meter**, since it does not go through the home's utility meter. [1]

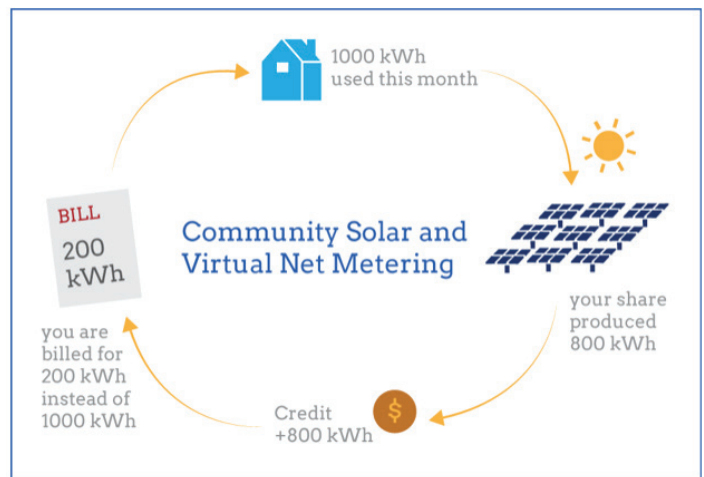
Community Solar Farm.

A community solar project is a solar power plant whose electricity is shared by more than one property. The capacity of the plant is .5 MW - 5.0 MW, which is considered community-scale as compared to utility-scale (greater than 5.0 MW).

The primary purpose of community solar is to allow members of a community the opportunity to share the benefits of solar power even if they cannot or prefer not to install solar panels on

their property. Community solar is thus an attractive option for renters or others who live in shared spaces. Project participants benefit from the electricity generated by the community solar farm, which costs less than the price they would ordinarily pay to their utility. [2]

Community solar uses Virtual Net Metering (VNM) and similar policies to provide financial benefit for those who use community solar. Like net metering for rooftop solar power, VNM and similar policies allow households or businesses to receive the net metering credits associated with a renewable energy project, though unlike rooftop solar it's a project installed at a remote location. These credits are worth as much (or almost as much) as what the household or business would pay for electricity from their utility. For example, every unit (kilowatt-hour or kWh) of electricity generated by the community solar farm will effectively reduce the participant's power bill, either as a one-for-one kilowatt-hour basis, or as a monetary credit. [3]



Source: <https://www.energysage.com/solar/community-solar/pricing-models/>

There are two main pricing models for community solar: ownership and subscription.

Ownership. It is common (and even required in some states) for community solar projects to be jointly owned by participants. If you own a share in a community solar farm, you will pay a set price for it – which you can either pay for up-front with cash or finance with a loan.

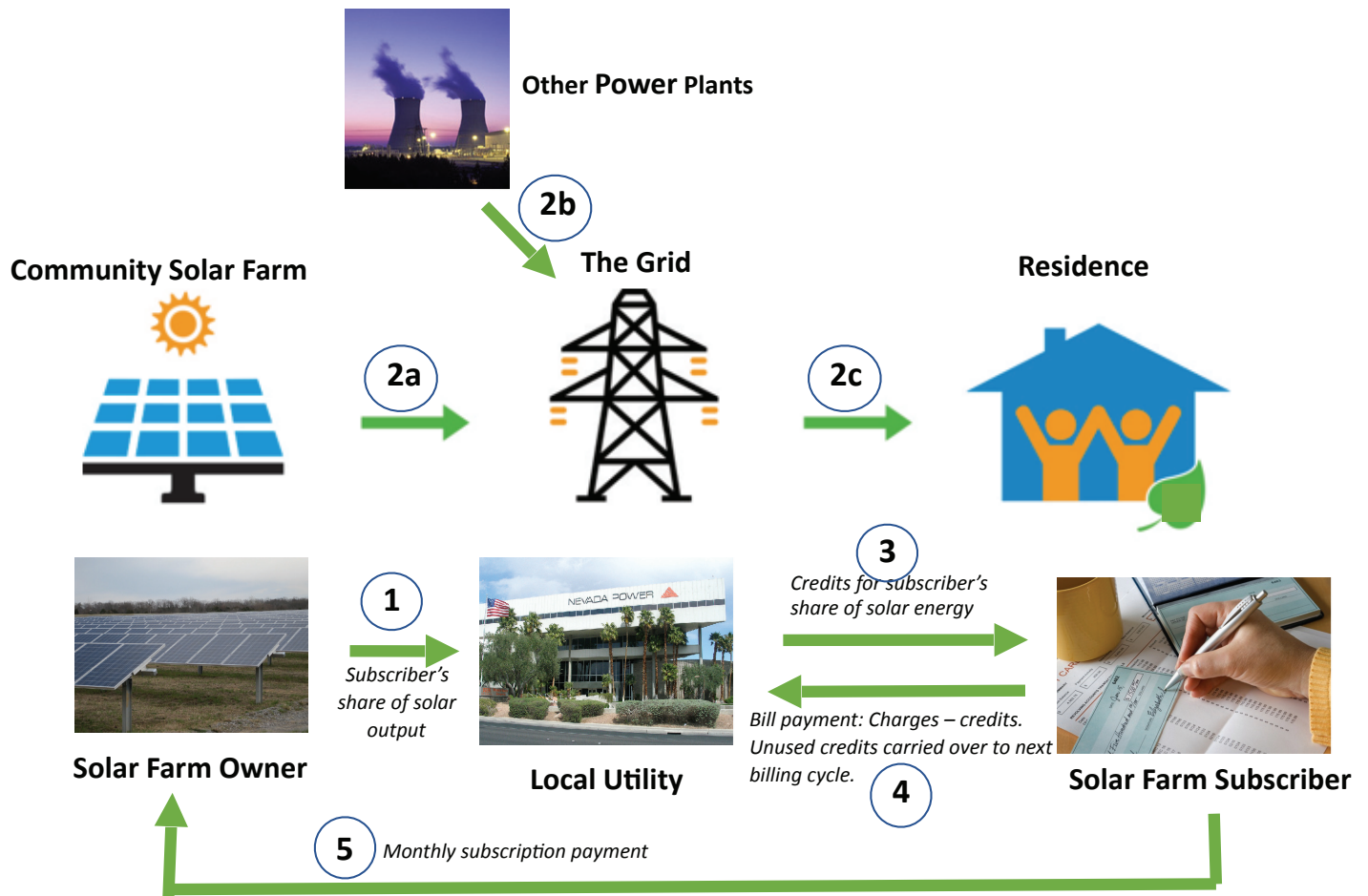
In states with virtual net metering, like New York, once the solar farm is operational you will begin to receive solar net metering credits on your monthly power bill equivalent to your share of

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the solar project's total electricity generation. Once you recoup your initial investment through these savings, you will continue to receive free electricity in the form of solar credits until you sell your share or the project is decommissioned (which can be 25 years or more). [3]

Subscription. The second option for joining a community solar project is a subscription. If you subscribe to a program, you will either pay for your solar electricity on a monthly basis through a type of power purchase agreement (PPA), or in a one-time up-front payment.

A community solar farm does not sell its electricity to the local utility. Rather, each subscriber is allocated a share of the electricity generated by the farm, based on the subscriber's annual electricity usage, and he is then given credits on his utility bill for this share of the electricity. With the monthly payment model, the subscriber also pays a monthly subscription fee to the solar farm; the net of the payment to the utility (if any) and the subscription to the solar farm is often advertised as being 10% less than the subscriber's current payments to the utility. The actual implementation details of this process may be different for each individual solar farm; the general concept is shown in the figure below.



Photos by Unknown Author licensed under [CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/)

Community Solar Farm: Adapted from <https://mysunshare.com/blog/how-does-community-solar-work/>

In **Step 1** of the sequence, the solar farm owner reviews the subscriber's annual electricity usage in order to assign that subscriber a share of the solar farm's generation. The solar farm owner then informs the utility company that the subscriber will be receiving a portion of the solar farm's production each month.

Step 2 illustrates the flow of electricity from the solar farm and other power plants through the grid to the subscriber's residence.

Steps 3, 4 and 5 are part of the monthly billing cycle. At the end of each month the utility credits the subscriber's account for the amount of electricity he was allocated by the solar farm. The subscriber pays his utility bill, which may be \$0 if his allocation exceeded his actual usage. Any unused credits are carried over to the next billing cycle, just like net metering for a rooftop solar system. The user also makes his monthly subscription payment to the solar farm owner. [4]

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Alternatives to Community Solar.

There are a number of other vehicles that allow individual investors, households and businesses to get involved in the clean energy economy.

Below are some of the approaches that are sometimes confused with community solar. [2]

- **Group Purchasing:** Group purchasing deals allow a large number of households or businesses to purchase their own individual solar systems at bulk rates through negotiations with a solar installation company. As such, group purchasing does not result in a communal project whose benefits are shared—once completed, each participant benefits separately from a separate system. In contrast, in a community solar project, all participants benefit from the same system, which is usually located on a piece of land not necessarily owned by any of the participants.
- **Green Power/ESCOs/Third Party Providers.** Green power arrangements or those with ESCOs (Third Party Providers) allow a utility's customers to purchase electricity from renewable energy generation plants—mainly hydro, wind, and solar. Those who sign up for green power programs generally do so to 'do the right thing,' rather than to save money on their power bills, since these options often come at a price premium. Importantly, participation in a green power plan does not necessarily result in the build-out of additional renewable power plants, as the electricity may be sourced from pre-existing facilities. Most community solar projects, on the other hand, are developed with a primary aim of saving participants money on their power bills.
- **Crowdfunding / Online Solar Investment Platforms:** Some companies have opened up renewable energy investment to the masses with online platforms that allow virtually anyone to invest into new solar power system installations. Under such arrangements, buy-in is set up purely as an investment, and the power that such a system generates is not associated with the participant's electricity bill in any way—and indeed may not be located in the same utility region, state or possibly even country. Returns from these projects may be taxable, whereas the benefits from a community solar plant are not.

Sources:

[1] "Connecting Your Solar Electric System to the Utility Grid", <https://www.nrel.gov/docs/fy02osti/31687.pdf>

[2] "Community Solar: What Is It?" <https://www.energysage.com/solar/community-solar/community-solar-power-explained/>

[3] "Community Solar: Pricing Models", <https://www.energysage.com/solar/community-solar/pricing-models/>

[4] "What is Community Solar", https://ampion.net/subscribe/?utm_source=google&utm_medium=cpc&utm_campaign=purchasers&utm_content=allsave&gclid=EA1alQobChMI8-njitbT6AlVxuDICh3RtgCKEAAyAAEgL3cFD_BwE

[5] "How Does Community Solar Work", <https://mysunshare.com/blog/how-does-community-solar-work/>

SPRING MIGRATION IS HERE! PLEASE KEEP CATS INDOORS.

by Linda Brunner

When we see the first robin we all know that spring is on its way. Just after these cheery heralds appear our familiar friends arrive; bluejays, cat birds, mockingbirds, and others that remain in our yards and parks to nest over the summer months. Mid-April to Mid-May brings other birds from their southern wintering grounds and they are something quite special. Song birds, raptors, and shore birds continue on to their breeding grounds in the boreal woods of Canada, Alaska, northeast New England and even the arctic (like the snowy owl, red poll and arctic tern). These are wonderful to see but require some searching out, and binoculars. Those tiny birds high in the tree may appear to be common sparrows or house finches, often called LBJs (or "little brown jobs") by birdwatchers, but a closer look through binoculars reveals tiny jewels of unexpected beauty. The iridescent blue of an indigo bunting, the colorful spot on the rose breasted grosbeak, the glistening yellows of many warblers, the knock-out red of a scarlet tanager, are not immediately apparent to the naked eye. A good look at any of these brings joy to the soul. Many of these species are threatened, even endangered, and all are in danger from free-roaming cats.

We have all seen the neighbors' cat, or perhaps the local feral one (which people may feed thinking that they are being "compassionate"), lurking under the backyard bird feeder. When we see a cat stalking a sparrow, cardinal or finch, it is often forgiven for "doing what comes naturally". But please keep in mind that could be a rare, threatened or endangered migrant on its exhausting trip from the tropics to a nest in our northern woods! It will die an agonizing death, perhaps lingering from wounds (cat saliva is toxic).

President George Fenwick of The American Bird Conservancy has stated "The carnage that outdoor cats inflict is staggering and can no longer be ignored... This is a wake up call for cat owners and communities to get serious about this problem before more ecological damage occurs."

A peer reviewed study determined in 2013 that at least 1.4 billion birds and 6.9 billion mammals are killed every year by outdoor cats. The study was co-authored by Scott Loss and Peter Marra, research scientists at the Smithsonian's Migratory Bird Center, and Tom Will, a research scientist with the U.S. Fish and Wildlife Service's Division of

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Please Keep Cats Indoors...
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Migratory Birds. The authors had first systematically reviewed more than 170 previous cat predation studies.

Another study was carried out by scientists from the University of Georgia and the National Geographic Society's Critter-cam program in 2012. Cats which wore special video cameras around their necks that recorded their outdoor activities killed an average of 2.1 animals every week while they were outside, but brought less than one of every four of their kills home. Of particular interest, bird kills constituted about 13 percent of the total wildlife kills. Based on these results, the American Bird Conservancy and The Wildlife Society estimate that house cats kill far more than the previous estimate of a billion birds and other animals each year.

It is also true that being outdoors is also harmful to cats themselves. Death by car, coyote or even mountain cat in some suburbs is possible, as are roundworm, hookworm, toxoplasmosis, guardians and campylobacter, which they can share with humans. A Cornell University scientist recently reported cases in Massachusetts and New York in which cats turned up infected with a worm often found in raccoons.

Please keep these sad statistics and dangers in mind if you own a cat, and keep our birds safe for at least this spring period when these at risk treasures are visiting.

TERRA FIRMA

NYS BUDGET WINS FOR THE ENVIRONMENT AMIDST COVID-19 CRISIS

By Gale Pisha

Despite unprecedented negotiating and voting conditions plus a looming \$15 billion deficit, Governor Cuomo and the New York State Legislature passed a budget in April that not only addresses the COVID-19 crisis and fiscal needs of the state during the emergency, but includes important initiatives to help protect the environment. The environmental provisions of this budget will go far towards addressing the ongoing threat of climate change and protecting our water, air and open spaces.

The 2020-2021 budget includes a \$3 billion "Restore Mother Nature Bond Act" that will be on the ballot in November if fiscal conditions improve. Funding will protect critical habitats, prevent flooding and safeguard our drinking water. A fully funded Environmental Protection Fund and next installment under the Water Infrastructure Improvement Act will also allow for land acquisition, farmland and open space protection, drinking water infrastructure and waste reduction.

New York's historic fracking ban was codified into law. This permanent fracking ban, combined with "The Accelerated Renewable Energy Growth and Community Benefit Act" (AREGCBA), another budget provision, will help our state move forward to meet the renewable energy goals mandated by the Climate Leadership and Community Protection Act (CLCPA) passed last year. The AREGCBA will accelerate the expansion of wind and solar projects in NY and bring economic benefits to host communities and workers who will fill these renewable energy jobs. Forty-seven new staff members will also be added to the Department of Environmental Conservation to administer CLCPA—while the agency has been critically understaffed for years, this is a good first step to restore some of those past cuts and make sure the state achieves its energy goals.

To accompany the single use plastic bag ban passed last year, this budget places a ban on disposable polystyrene food containers and packing peanuts, to take effect by 2022. E-bikes and e-scooters are now legal, and provisions to improve the Child Safe Products Act were included. The latter requires that harmful chemicals in children's products be disclosed and eventually phased out.

While Sierra Club and other coalition partners did not get everything we were asking for in the budget, in the context of such a difficult budget process we are thankful for the important provisions that did get passed, each of which contributes to the long-term well being of our communities and ecosystems and brings us closer to meeting our renewable energy goals. Thank you to all our members who took action to contact your legislators when we asked you to—this is your victory as well as New York State's!



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LOWER HUDSON GROUP

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WESTCHESTER, PUTNAM & ROCKLAND COUNTIES

*"Visible, positive impacts [of the COVID-19 pandemic] are but temporary, because they come on the back of tragic economic slowdown and human distress."
Inger Andersen, Executive Director, UNEP*



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