

Stopping Climate Change in New York

100 percent renewable energy by 2030

Rising global temperatures risk irreversible worldwide ecological and climatic changes, with widespread impacts on human health and natural systems. The threats include more violent storms, droughts, floods, acidifying and rapidly warming oceans, and altered growing seasons.¹ Climate change has already strengthened storms like Superstorm Sandy that devastated New York City and Long Island.² We must rapidly transition away from dirty fossil fuels like coal, oil and natural gas to clean, renewable energy as soon as possible to prevent the worst effects of a warming planet.³ New York must — and can — shift to 100 percent renewable energy by 2030.

The Urgent Need to Act Now on Climate

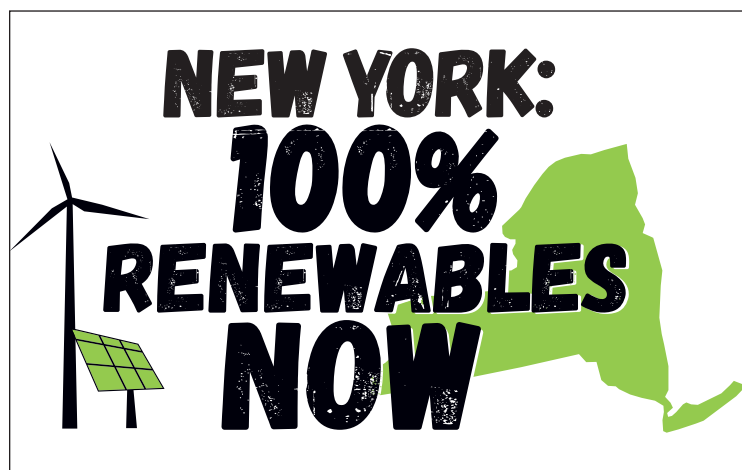
The warming of the planet is already causing significant damage that is expected to get worse. U.S. temperatures have increased dramatically over the past century, and this warming has only accelerated over the past few decades.⁴ Since 1970, average New York temperatures have increased by about 0.6 degrees Fahrenheit (0.33 degrees Celsius) per decade.⁵ New York's coastal sea levels have risen approximately one foot over the last 100 years, due mostly to the expansion of warming ocean water.⁶

Climate change has likely exacerbated the impacts of severe weather events like Sandy.⁷ Superstorm Sandy destroyed over 300,000 homes across New York State,

caused \$19 billion in damages in New York City alone and killed 48 people.⁸ Researchers estimate that New York City is the most vulnerable U.S. city to climate change-related storms, with 426,000 people living in areas at risk to severe weather through 2050.⁹ Lower-income people and people of color, who tend to live in industrial waterfront areas at greatest risk of storm surge, will be disproportionately affected.¹⁰

Climate change impacts will be expensive. Rising sea levels and more and more intense storms will likely escalate flood and homeowner insurance rates.¹¹ Hurricanes like Sandy, already one of the most expensive in U.S. history, are expected to cost New York up to \$3 billion in additional damages per year by 2050 as a result of sea-level rise alone.¹²

Pollution, extreme heat days and disease transmission — and the associated public health risks — are expected to worsen as the planet warms.¹³ The most vulnerable New York populations, such as people of color, the elderly and children, will be the most impacted.¹⁴ Increasing temperatures raise the risk of heat-related death in lower-income communities.¹⁵ Other threats include increased concentrations of ground-level ozone, a respiratory toxicant, and higher risk of insect-borne diseases like Lyme disease and West Nile virus.¹⁶



New York's Electricity Mix Needs to Rapidly Shift to Clean, Renewable Energy

Currently, much of New York's power comes from greenhouse gas-emitting fossil fuels. In 2016, natural gas-fired power plants delivered 42 percent of New York's electricity.¹⁷ Less than 4 percent of New York's electricity came from clean renewables like wind, solar, tidal or geothermal energy.¹⁸

Although New York banned fracking in 2015, the state has increasingly relied on fracked natural gas and electricity generated by gas-fired power plants imported from Pennsylvania to supply its energy needs, essentially shifting much of the state's environmental and health impacts outside state lines.¹⁹ Natural gas imports from Pennsylvania doubled since Governor Andrew Cuomo announced the ban in 2014.²⁰ New York is poised to import even more electricity from fracked-gas-fired power plants in central and eastern Pennsylvania slated to go online by 2018.²¹

New York Must and Can Shift to Clean Renewables

New York's continued reliance on fossil fuels — and imported electricity generated by fracked gas — only perpetuates a dirty energy future that threatens our climate. The New York Off Fossil Fuels Act (NY OFF Act, A. 5105/S. 5908) is the strongest climate bill in history and charts a path for New York to achieve 100 percent renewable energy by 2030. The bill curbs climate change while emphasizing environmental justice goals, involving stakeholders from communities of color and lower-income areas and providing needed funding to address pollution in disadvantaged communities.

The bill calls for a complete and rapid overhaul of the current energy system — a daunting task, but we can and we must do it. As President John F. Kennedy said about the Apollo mission to put a man on the moon, we do it “because that challenge is one that we are willing to accept, one that we are unwilling to postpone, and one which we intend to win.”

The NY OFF Act is our best chance at tackling climate change, and the most necessary. It promotes a clean energy system based on wind, solar and other sources of genuinely renewable energy; on energy storage and on continued improvements in energy efficiency. We have no time to lose.

New York's Untapped Reservoir of Clean Energy

New York State has the ability to tap into large potentials of clean energy — primarily wind and solar power and improvements in energy efficiency.²² New York has more than enough renewable energy resources to completely replace fossil fuel consumption by 2030.²³

New York is ranked 13th in the nation for installed wind power, which generates nearly 3 percent of the state's electricity.²⁴ The New York State Energy Research and Development Authority found that New York has the potential to generate much more, over 44,000 megawatts of onshore and offshore wind electricity — including offshore wind on Lake Erie, on Lake Ontario and off the coast of Long Island — enough energy to meet just under 25 percent of the state's electricity demands by 2030.²⁵ In 2017, the Long Island Power Authority approved a 15-turbine offshore wind farm, the nation's largest, in the waters between Long Island and Martha's Vineyard, with the potential to generate power for 50,000 homes.²⁶ Over 4,800 megawatts of wind energy are in the pipeline for future additions to New York's electricity grid, which would increase current generation by over 3.5 times.²⁷

New York has significant solar power potential as well. From 2011 to 2016, New York solar power capacity — bolstered by state initiatives — grew by nearly 800 percent.²⁸ NY-Sun, an energy initiative launched by Governor Cuomo in 2012, aims to add another 3,000 megawatts of capacity by 2023, enough to power 400,000 homes.²⁹ And there is plenty of room for more growth.



Wind turbines line the shore of Lake Erie near Buffalo, New York.

The New York State Energy Research and Development Authority estimates that solar technology could potentially meet over one-fourth of the state's electricity needs by 2030, but New York receives more than enough sunlight for solar power to deliver many times more electricity than the state consumes.³⁰ Furthermore, New York could fulfill all its electricity needs from solar systems that will require less than 1 percent of the state's total land area.³¹

Emerging and improving battery storage technology is already being deployed to integrate these renewable power resources into a reliable and resilient electricity system.³² These estimates suggest that current policies and technology trends could power half of New York with wind and solar by 2030.³³ Already, renewables are being deployed at unprecedented rates, exceeding expectations many times over.³⁴ A more rapid shift to genuine renewables under the NY OFF Act would supercharge this shift.

Economic Benefits of Clean and Efficient Power

A rapid shift to renewable energy will protect the planet and strengthen the economy. Increased solar and wind energy substantially reduce greenhouse gas emissions, lower overall energy costs and improve electric power grid reliability.³⁵ Energy efficiency is another key component to reducing consumption and dependence on dirty fuels and is an incredibly cost-effective way to reduce greenhouse gas emissions and toxic pollutants.³⁶

New York has consistently led the nation in energy efficiency policy and investment, but the future potential for energy efficiency is still "vast and remains largely untapped," according to the U.S. Department of Energy.³⁷ Energy efficiency could reduce electricity use by 45 percent in 2030 and create billions of dollars of economic benefits to the state, doubling the return for every dollar invested.³⁸ Clean and renewable energy investments create and sustain jobs. As of 2016, over 130,000 New Yorkers worked in solar, wind, energy efficiency and other clean energy industries.³⁹ These job opportunities have been growing faster than the statewide average,⁴⁰ and as New York invests more in renewables and efficiency, these jobs will continue to grow.

Take Action

The NY OFF Act charts the strongest path to tackle climate change by pushing for a 100 percent clean energy economy. New York has the potential to achieve this transition and reap the substantial economic benefits. Governor Cuomo set a goal of 50 percent renewables by 2030, but New York must take more decisive action now to achieve 100 percent clean energy by 2030. Tell the governor and your members of the New York legislature to support the NY OFF Act today: fwwat.ch/NY100NOW

For more information, contact Food & Water Watch's New York office at (347) 778-2743.

Endnotes

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