New York Renewable Portfolio Standard Report Card: D+

New York's Renewable Portfolio Standard (RPS) sets renewable electricity goals and determines which energy sources qualify as renewable. These programs can be a vital part of a state's energy policy portfolio to drive the shift to renewable energy. But New York's weak RPS program cannot foster the rapid transition to clean, renewable energy in time to stave off the worst effects of climate change. The state's RPS program is further compromised by New York's continued reliance on imported natural gas and natural gas-fired electricity.

The New York RPS program is undermined by its lackluster target combined with a weak portfolio definition that counts dirty power sources toward its renewable energy goals — including burning wood and burning waste methane from landfills, sewage treatment plants and factory farms. It also allows renewable energy "credits" (RECs), which allow utilities to continue burning fossil fuels while buying credits for renewable power produced elsewhere, even outside of New York.

New York's RPS program is better than that of many states (see Table 1), largely because it includes fewer dirty energy sources in its portfolio, but it lags significantly behind some states in the projected transition to wind, solar and geothermal power. New York can and must do better. New York must strengthen its RPS program by expelling dirty energy sources, eliminating RECs and strengthening its target to achieve 100 percent clean, renewable energy within 20 years.

New York and the United States must rapidly shift to 100 percent clean, renewable power — produced from wind, solar and geothermal energy. The majority of U.S. electricity still comes from climate-destroying fossil fuels.[1] In 2016, natural gas-fired power plants delivered 42 percent of New York's electricity, and less than 4 percent came from clean renewables like wind or solar energy.[2]

Washington's failure to act on climate change means that the states must take decisive action to transition to clean

TABLE 1. Grading New York's Renewable Portfolio Standard

RPS provision	Ideal RPS	New York RPS	New York grade	Average state grade
Target and time frame	100%	50% by 2030	C	D (30% by 2026)
Dirty portfolio and RECs	No RECs, none of 6 dirty energy sources	Allows RECs and 2 dirty energy sources	C	D (allow 4 dirty sources/RECs)
Transition to renewable energy	Shift to 100% by 2038	Projected to achieve 10% by 2038	F	D (projected to achieve 31% by 2038)
Overall			D+	D

energy. Strengthening RPS programs is an important component of state climate policies and could dramatically increase the renewable power generation necessary to curb climate change.

Introduction to Renewable Portfolio Standards

State renewable portfolio standards establish a renewable power goal and target date and define which sources of energy count toward fulfilling the renewable electricity goals. All states allow solar and wind power, but they also allow a range of dirty energy sources such as municipal waste incineration or even coal. Almost all states allow utilities to purchase renewable energy credits (RECs), instead of generating renewable energy.[3]

Iowa adopted the first mandatory RPS in 1983, and New York adopted its RPS law in 2004.[4] By 2018, 29 states and the District of Columbia had mandatory RPS programs, covering utilities that delivered 56 percent of U.S. electricity sales.[5]

Strong RPS programs can be essential parts of state renewable energy policy, along with energy efficiency standards, tax incentives and grants for installing renewable energy, and other programs. But renewable incentives can be undercut when New York 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 environmental and health impacts outside state lines.[6] New York has also been participating in the ineffective Regional Greenhouse Gas Initiative carbon trading program, which has encouraged the shift to natural gas but does not account for rising emissions of the potent greenhouse gas methane from leaks during natural gas production, processing and distribution.

Food & Water Watch evaluated New York's RPS program based on the strength of its target, the inclusion of RECs and dirty energy sources, and how well it was projected to shift its energy mix to wind, solar and geothermal power sources over the coming decades. (For more on the scorecard, see *Cleanwashing: How States Count Polluting Energy Sources as Renewable*[7])

New York's RPS target goal and time frame are too weak to curb climate change

Strong RPS policies would set a target of 100 percent renewable electricity generation from only wind, solar and geothermal energy, which is imperative to avoiding the worst

effects of climate change. The planet is poised to emit more carbon dioxide than what the Intergovernmental Panel on Climate Change conservatively estimated would give us only a two-out-of-three chance of avoiding a catastrophic 1.5 degrees Celsius rise in temperature.[8] As the concentration of greenhouse gases in the atmosphere exceeds crucial thresholds, the effect on climate change could be sudden and potentially irreversible.[9] Reducing these emissions by about 20 percent every year would drive emissions to near zero within 20 years.[10]

New York's RPS target requires public and private utilities to generate or procure 50 percent of their power from renewable sources by 2030.[11] These targets are not strong enough to halt or reverse climate change.

New York's RPS allows dirty energy sources and policies

Food & Water Watch identified six dirty "renewable" energy sources as well as whether states allowed RECs that must be expelled from RPS programs. New York's RPS allowed two dirty energy sources — waste methane and wood-burning power — as well as RECs.[12] New York's RPS did not include several common RPS dirty sources (including garbage incineration, so-called clean coal, nuclear power and paper mill waste), but it must shed waste methane, wood-fired power plants and RECs to clean up its RPS program.

Waste methane (landfills, sewage treatment plants and factory farms): New York's RPS included burning waste methane from landfills, sewage treatment plants and animal waste, such as manure digesters (burning the methane released from factory farm manure).[13] This methane is often referred to as biogas.[14] Biogas is primarily methane and is essentially indistinguishable from fracked natural gas, with many of the same problems.[15] Burning biogas or methane releases greenhouse gases as well as pollutants including nitrogen oxides, ammonia and hydrogen sulfide.[16]

Sixteen New York dairy farms with a total of over 21,000 cows had manure digesters that supplied the electricity grid in 2017.[17] These expensive, inefficient and polluting facilities mostly generate power for the facilities themselves — approximately half the energy from factory farm digesters may be needed to power the digesters themselves.[18]

Methane combustion emissions, methane leaks, accidental manure spills and explosions mean that digesters provide neither clean nor safe energy.[19] By 2017, New York had already provided $21.8 million in taxpayer subsidies for dairy farms to build manure digesters.[20] Instead, the subsidies and on-farm power generation only encourage the expansion of an unsustainable food production system to create more and larger factory farms.

Wood-fired power plants: Processing, transporting and burning wood all produce greenhouse gas emissions, and burning wood can release more emissions than coal.[21] These wood-fired power plants also emit particulate matter and other airborne pollutants that harm respiratory health and increase risks from asthma and heart disease.[22] At the end of 2017, there were two wood-burning power plants in New York: a 60 megawatt plant at Fort Drum that also supplies the grid and a 22 megawatt plant in Lyonsdale, which the company threatened to shutter if it did not receive state subsidies.[23]

Renewable energy credits: Allowing RECs under New York's RPS permits utilities to burn polluting fuels while purchasing distant renewable energy credits, potentially diminishing the environmental and job creation benefits of renewable energy.[24]

New York's RPS is not strong enough to achieve 100 percent renewables within two decades

Most states would not meet their RPS goals through wind, solar and geothermal power alone, and almost no states are on track to deliver 100 percent clean, renewable power by 2038. New York has lagged behind many states in installing wind, solar and geothermal power. New York is projected to source only 10 percent of its power from wind, solar and geothermal by 2038 (and only 8 percent by 2030), far too little to curb climate change or meet its RPS target.[25] New York's slow renewable adoption ranked among the bottom third of states with mandatory RPS programs.

Now is the time to strengthen New York's RPS program

Robust mandatory RPS programs can be an important part of state policies to encourage the shift to renewable energy. New York must raise its target goal, expel dirty energy sources and eliminate renewable energy credits to ensure that the policies can promote a swift transition to genuine renewable energy. New York must raise its RPS goal to 100 percent renewable energy and eliminate RECs, wood-burning power, and waste methane from landfills, sewage treatment plants and factory farms from its eligible RPS energy sources.

Endnotes

1 Food & Water Watch analysis of U.S. Department of Energy (DOE). Energy Information Administration (EIA). Calculation based on Forms: EIA-826, "Monthly Electric Utility Sales and Revenues with State Distributions Report," EIA-860, "Annual Electric Generator Report." EIA-861, "Annual Electric Power Industry Report" and EIA-923, "Power Plant Operations Report." Data downloaded April 2018.

2 *Ibid*.

3 *See* Food & Water Watch. "Cleanwashing: How States Count Polluting Energy Sources as Renewable." July 2018 at 8.

4 Iowa Code §476.44; 77th Iowa G.A. Chapter 182, S.F. 380; New York Public Service Commission (NYPSC). "Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard: Order Approving Implementation Plan, Adopting Clarifications, and Modifying Environmental Disclosure Program." Case No. 03-E-0188. April 14, 2005 at 1 to 2.

5 Barbose, Galen. Lawrence Berkeley National Laboratory. "U.S. Renewables Portfolio Standards 2017 Annual Status Report." July 2017 at 6. Note: 56 percent figure cited is as of July 2017.

6 Food & Water Watch analysis of EIA-826, EIA-860, EIA-861 and EIA-923; "It's official: New York bans fracking." *Reuters*. June 30, 2015; EIA. New York International and Interstate Movements of Natural Gas by State. September 29, 2017 at Data 3: Net International & Interstate Receipts; "First turbine to arrive at new Salem power plant." *Wilkes-Barre (PA) Times Leader.* February 17, 2017; Phillips, Susan. "New natural gas plant to replace shuttered coal facility in Snyder County." *NPR StateImpact Pennsylvania.* October 28, 2015; Moore, Marcia. "Hummel Station natural gas power plant to begin operations early next year." *Sunbury (PA) Daily Item*. April 21, 2017.

7 *See* Food & Water Watch (2018).

8 Pachauri, Rajendra K. et al. "Climate Change 2014: Synthesis Report." Intergovernmental Panel on Climate Change (IPCC) (IPCC Synthesis). 2015 at 64; Food & Water Watch calculation based on: Le Quéré, Corinne et al. "Global carbon budget 2016." *Earth System Science Data.* Vol. 8, Iss. 2. November 14, 2016 at 609 and 633; Friedlingstein, P. et al. "Persistent growth of CO2 emissions and implications for reaching climate targets." *Nature Geoscience*. Vol. 7. September 21, 2014 at 710.

9 Drijfhout, Sybrean et al. "Catalogue of abrupt shifts in Intergovernmental Panel on Climate Change climate models." *Proceedings of the National Academy of Sciences*. October 12, 2015 at E5777.

10 Ibid; Friedlingstein et al. (2014) at 710.

11 NYPSC. "Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard." Case No. 15-E-0302. August 1, 2016 at 11, 65 to 66, 78 and 94.

12 NYPSC (2005) at Appendix B at 1 to 4; NYPSC (2016) at 106.

13 NYPSC (2004); NYPSC (2005).

14 U.S. Environmental Protection Agency (EPA), DOE and U.S. Department of Agriculture. "Biogas Opportunities Roadmap." August 2014 at 8.

15 Anderson, Larry G. "Effects of using renewable fuels on vehicle emissions." *Renewable and Sustainable Energy Reviews*. March 2015 at 163 and 164.

16 Kuo, Jeff. California State University, Fullerton. "Air Quality Issues Related to Using Biogas From Anaerobic Digestion of Food Waste." February 2015 at 2; Sharvelle, S. and L. Loetscher. Colorado State University. "Anaerobic Digestion of Animal Wastes in Colorado." May 2011 at 1 and 3; Whiting, Andrew and Adisa Azapagic. "Life cycle environmental impacts of generating electricity and heat from biogas produced by anaerobic digestion." *Energy*. Vol. 70. 2014 at 181, 184, 187 and 191 to 192.

17 Food & Water Watch analysis of data from EPA. AgStar Livestock Anaerobic Digester Database. Available at www.epa.gov/sites/production/files/2017-11/agstar-projects-112917.xlsx. Accessed March 2018.

18 Post, Tom. "Farmer uses methane to make electricity." *Minnesota Public Radio News*. June 27, 2008; Lopez, Ricardo. "From waste to watts." *Los Angeles Times.* June 9, 2013.

19 Flesch, Thomas K. et al. "Fugitive methane emission from an agricultural biodigester." Biomass and Bioenergy. 2011 at 3927; Verburg, Steve. "Blast destroys roof of troubled biodigester near Waunakee." *Wisconsin State Journal.* August 6, 2014.

20 Food & Water Watch analysis of New York State Energy Research Development Authority data provided under Freedom of Information Law request 2017-62. October 24, 2017.

21 Harrabin, Roger "Concerns over carbon emissions from burning wood." *BBC*. July 24, 2014.

22 Zeller, Tom Jr. "Net benefits of biomass power under scrutiny." *New York Times*. June 18, 2010.

23 "Fort Drum powered by wood-burning power plant in renewable energy push." *Syracuse Post-Standard*. November 23, 2014; "Wood-burning power plant shutting down for lack of subsidies." *Associated Press.* December 24, 2017; Booker, Ted. "ReEnergy chief warns Lyonsdale biomass plant could close in 90 days." *Watertown Daily Times*. February 18, 2016.

24 Mack, Joel et al. "All RECs are local: how in-state generation requirements adversely affect development of a robust REC market." *Electricity Journal.* Vol. 24, Iss. 4. May 2011 at 9 to 11.

25 Food & Water Watch analysis of EIA-826, EIA-860, EIA-861 and EIA-923. Food & Water Watch estimated the projected in-state share of utility scale power (including distributed rooftop solar) generated by wind, solar (including rooftop solar) and geothermal and the share of retail electricity sales from in-state wind, solar (including rooftop solar) and geothermal to 2038 with a 10-year linear projection of these annual percentages based on the 2007 to 2016 period.

info@fwwatch.org
202.683.2500 (DC) • 510.922.0720 (CA)