

## Green Education and Legal Fund

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### Testimony of the Green Legal and Education Fund Inc. To the New York State Legislature Joint Budget Hearing on the 2017-18 Executive Budget Proposal on Environmental Conservation

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My name is Mark Dunlea and I am chair of the Green Education and Legal Fund (GELF). Thank you for the opportunity to testify today on the state budget and environmental and energy issues.

GELF urges that state legislature to increase the investment in a transition to 100% clean energy. This starts with passage of legislation to amend the state Energy Master Plan to go to 100% clean renewable energy by 2030 (A5105 / Hoyleman S5527 in 2016). This includes enacting a carbon tax (A107 / S2846), starting with a feasibility study on such tax (A1919). Additional investments are needed in renewable energy, starting with Offshore Wind.

The sobering reality is that 15 years after Governor Pataki announced bold goals to increase renewable energy – and 7 years into the Cuomo era – New York gets a mere 3% of its electricity from wind, solar and geothermal energy<sup>1</sup>. Setting goals is one thing, achieving them is something else. California in contrast recently announced that it expects to get 50% of its electricity from renewable energy by 2020 – ten years faster than they planned.<sup>2</sup> The Governor of New Jersey managed in his first two weeks in office to issue an Executive Order to surpass what NYS is doing on renewables and climate change, starting with off shore win. Texas gets 18% of its electricity from wind and solar.<sup>3</sup>

New York's poor performance on renewables hinders job growth and economic development in our state. Still, nationwide, jobs in the renewable electric industry already outstrips those in the fossil fuel industry by 5 to 1.<sup>4</sup> In NYS, the US Department of Energy estimates that jobs in clean energy outnumber those in oil, coal and gas by 13 to 1, though most of the jobs are in “energy efficiency,” which including 30,000 in HVAC. NYS has about 13,200 jobs in solar and wind and 5,850 in hydro.<sup>5</sup> California in contrast has 157,000 in solar and wind (mainly in solar).

A recent study showed that if New York was to make the investments needed to achieve even the Governor's limited goal of 50% of the state electricity's from renewable by 2030, with a 40% reduction in greenhouse gas emission, it would generate between 145,000 and 160,000 jobs per year in the state.<sup>6</sup>

<sup>1</sup> Net Generation by State by Type of Producer by Energy Source (EIA-906, EIA-920, and EIA-923), <https://www.eia.gov/electricity/data/state/> - lines 46674-46686

<sup>2</sup> California Public Utilities Commission, “Renewables Portfolio Standard,” Annual Report, November 2017, [http://www.cpuc.ca.gov/uploadedFiles/CPUC\\_Website/Content/Utilities\\_and\\_Industries/Energy/Reports\\_and\\_White\\_Papers/Nov%202017%20-%20RPS%20Annual%20Report.pdf](http://www.cpuc.ca.gov/uploadedFiles/CPUC_Website/Content/Utilities_and_Industries/Energy/Reports_and_White_Papers/Nov%202017%20-%20RPS%20Annual%20Report.pdf) – p. 1

<sup>3</sup> <https://blogs.scientificamerican.com/plugged-in/texas-got-18-percent-of-its-energy-from-wind-and-solar-last-year/?platform=hootsuite>

<sup>4</sup> <https://www.nrdc.org/experts/lara-ettenson/us-clean-energy-jobs-surpass-fossil-fuel-employment>

<sup>5</sup>

[https://energy.gov/sites/prod/files/2017/01/f34/2017%20US%20Energy%20and%20Jobs%20Report%20State%20Charts%20\\_0.pdf](https://energy.gov/sites/prod/files/2017/01/f34/2017%20US%20Energy%20and%20Jobs%20Report%20State%20Charts%20_0.pdf)

<sup>6</sup> Clean Energy Investments for New York State: An Economic Framework for Promoting Climate Stabilization and Expanding Good Job Opportunities, By Robert Pollin, Heidi Garrett-Peltier, and Jeannette Wicks-Lim, Department of Economics and Political Economy Research Institute (PERI), University of Massachusetts-Amherst, November 2017

Cuomo's climate agenda has focused primarily on electricity – which accounts for less than 25% of the state's carbon footprints. Progress has been even slower on transportation and the heating / cooling of buildings, with each accounting for about 1/3 of the state's carbon footprints. Energy efficiency has been neglected.

The Governor has been penny wise and pound foolish on energy and climate change issues. This has especially been true in offshore wind. To achieve 100% clean energy, one study estimated that the State would need 40% of its power from off shore wind<sup>7</sup>, with the area off of Long Island being the Saudi Arabia of wind. NY needs to make the investment in OSW that Europe has, where the last project bid in Germany came in at only 5 cents per Kwh, less than a third of the cost of the first small project Cuomo approved for LIPA<sup>8</sup>. We saw a similar problem when Cuomo recently changed the net metering rules for community solar farms, slowing down an industry that produces less than 1% of the state's electricity.

It is estimated that the transition to 100% clean energy for New York State will require \$460 billion in investments over the next decades. While much of the funding will come from diverting existing planned investments in fossil fuel infrastructure to renewable energy, significant additional revenues are needed. One step would be to make polluters pay through a state carbon tax, with potential revenues of \$7 billion a year. The burning of fossil fuels kills as 3,000 or more New York residents annually while causing an estimated \$30 billion in damages.

We need to halt any more fossil fuels infrastructure while investing in clean renewable energy. Instead Cuomo has embraced natural gas as a “cheap bridge fuel” despite the fact that methane is 80 times more potent short term as a greenhouse gas compared to carbon. The Governor wants to spend \$100 million to build two new plants to power the Empire State Plaza with fracked gas from Pennsylvania. He instead should make the Capitol a model for a clean energy future, pursuing renewable alternatives such as geothermal as other states including Oklahoma have done. The State Legislature should attach conditions to the \$88 million reappropriation of funds to OGS to ensure this happens.

The state should adopt goals- including mandates - to energy retrofit every building in the state within the next decade; it should establish a program similar to Solar City where it upfronts the costs of installing solar and other renewable energy systems on every building, recouping the investment through the savings in energy costs.

We urge the State legislature to hold hearings on the Governor's climate agenda, including the study on transitioning to 100% renewable energy which is expected to be completed by NSYERDA in 2018, with the first draft to be released this month.

New York should adopt a climate action plan to quickly transition to 100% clean energy, with clear timelines, activities, funding and benchmarks. A climate action plan is required under an existing 2009 Executive Order.<sup>9</sup> (A draft plan has sat on the DEC website for 7 years.<sup>10</sup> )The US conference of Mayors recently endorsed 100% clean energy by 2035.<sup>11</sup>

<sup>7</sup> <https://web.stanford.edu/group/efmh/jacobson/Articles/I/NewYorkWWSEnPolicy.pdf>

<sup>8</sup> <https://www.offshorewind.biz/2017/04/13/germany-accepts-first-subsidy-free-offshore-wind-auction-bid/>

<sup>9</sup> <http://www.dec.ny.gov/energy/71394.html>

<sup>10</sup> <http://www.dec.ny.gov/energy/80930.html>

<sup>11</sup> <https://insideclimatenews.org/news/26062017/mayors-conference-supports-100-percent-renewable-energy-electric-vehicles-climate-change>

We support the acceleration of efforts to expand mass transit and to move to 100% Zero Emission Vehicles. New York should work with California to adopt goals similar to Norway which requires 100% of all new car sales to be 100% ZAV by 2025.

New York State should promote energy democracy, with community control / ownership of the energy system, ensuring that low and moderate income New Yorkers can participate in our energy future. We support the Governor's Article VII proposals to allow NYPA to own renewables. We support public ownership of much of the energy system at both the state and local level in order to reduce costs and to ensure that the energy systems meets public needs rather private profits. We need a Just Transition to ensure that workers and vulnerable communities are assisted.

We support proposals to increase the investments in a Just Transition to clean energy, including dedicating 40% of new climate funds to be targeted to disadvantaged communities feeling the brunt of climate change. We need to avoid the gentrification of our energy system, ensuring that low-income individuals and communities can fully participate in our clean energy future. We need to support energy democracy, including the development of community shared renewables, Community Choice Aggregation, and public ownership / worker / community cooperatives.

We support the proposal by Assemblymember Barrett to provide a tax credit to farmers who practice regenerative agriculture to reduce their carbon footprint and return carbon to the soil.

We support the proposal to divest the state pension funds from all fossil fuels (A3712 / Krueger). We are glad that Governor Cuomo in December announced his support for divestment and that in January 2018 the NYC elected officials and union leaders who are voting members on NYC's various public pension funds announced their support for divestment. Divestment should be included as part of the state budget.

We continue to oppose the Governor's \$7.6 billion subsidy to Exelon to keep open a handful of old, failing upstate nuclear plants. GELF is a plaintiff in the lawsuit filed by Clearwater challenging this nuke bailout, where the State Supreme Court last motion rejected the state's motion to dismissed. The state failed to adequately evaluate alternative approaches on how to spend \$7.6 billion to create jobs and promote clean energy.

We urge the state legislature to enact a ban on plastic bags, with a fee on other bags at retail outlets.

We support the Governor's budget proposals related to reducing food waste.

We support New York allowing Community Choice Aggregation in NY to operate under rules similar to those in California, giving CCAs the power to negotiate directly for the purchase of electricity in order to support the development of local renewable energy sources.

### **Climate Change is the Greatest Threat to Humanity**

The COP21 Climate Agreement set 1.5°C as the new global warming limit, as the developing countries were able to prevail upon the industrial carbon polluters that 2 degrees warming would be too catastrophic for much of the planet. The goals that New York previously adopted under Governor Paterson in 2009 and more recently by Governor Cuomo were based on the old 2 degrees' target. This was a radical change by international leaders but its implications have not yet been grasped here in the US.

The 1.5°C marker pathway is defined as the most challenging mitigation pathway that can still be defended as being techno-economically achievable. Climate researcher Glenn Peters has projected that meeting the 1.5°C target would require a global fossil fuel phase-out between 2025 and 2030, plus a large-scale effort to remove excess carbon dioxide from the atmosphere. Bill McKibben of

350.org says it means: 85-90% of remaining carbon must stay in the ground. Emissions must be reduced by 9-10% per year to reach a de-carbonized world by 2030-2040; and the developed world (us) must reach net zero emissions in 5-10 years.

The window to avoid catastrophic climate change is rapidly closing. A new study estimates that we have one to four years left before we deplete our remaining carbon budget. 2017 was the second hottest on record – the hottest if we account for El Nino effect.

A recent article noted “we have already passed 1°C warming, and the Paris goal was to stop at 1.5°C, which we will now hit anytime from nine months to nine years. Estimates to then reach 2°C span from 8 to 22 years.” Jim Walsh of Food and Water Watch stated: “In 2010, the International Panel on Climate Change stated that we have a 2/3 chance of avoiding a 1.5°C rise in temperature if we keep CO<sub>2</sub> emissions below 400 gigatons. But to put that in perspective, we have already emitted 200 gigatons of CO<sub>2</sub> since 2010. At our current rate of nearly 40 gigatons of CO<sub>2</sub> each year, we will exceed that 400 gigatons threshold in about 5 years.”<sup>12</sup>

The article continued: “The global atmospheric carbon dioxide (CO<sub>2</sub>) concentration has now passed 400 parts per million (ppm), a level that last occurred about 3 million years ago, when both global average temperature and sea level were significantly higher than today. Continued growth in CO<sub>2</sub> emissions over this century and beyond would lead to an atmospheric concentration not experienced in tens to hundreds of millions of years.”

Many Americans are more concerned about climate change and extreme weather following the devastating hurricanes in the Gulf Coast, Florida and Puerto Rico, and the massive wildfires in California. More than four months after the hurricane, more than a third of Puerto Rico still do not have electric power and many do not have drinking water.

The world has already experienced tens of millions of climate refugees, including those fleeing the resulting violence in Syria. New York is now experiencing climate refugees from Puerto Rico and the Virgin Islands. The most pessimistic assessment of climate change by scientists have invariably been found the one closest to being correct. The planet is already engulfed in the sixth great extinction of species in the planet’s history, something that climate change will only make worse.

A recent study by the University of San Diego – which Gov. Brown accounted for – concluded that there was a 30% chance that human beings could be extinct by 2070<sup>13</sup> – a sobering statistic.

NYS itself officially just dramatically revised its estimate of sea level rise to 6 feet by the end of this century. Studies by Dr. James Hansen and other scientists, along with NOAA, found that the ice shelves are melting so rapidly that it possible that sea levels may rise up to 9 feet by 2050. NYC is one of the three most vulnerable cities on the planet to rising sea levels. It is also possible that there will be parts of the US where humans cannot go outside by the end of this century.

The NYS State Budget should have a dedicated section just to detailing investments and expenditures related to climate change.

New York is relying far too much on the “market” that helped create the climate crisis to now solve it. (Yet ironically the Cuomo administration has resisted a carbon tax to correct the market.) NY needs a far more aggressive intervention that requires a significant increase the investment of public funds. A major purpose of government should be to set the goals, pathways and benchmarks for the economy to meet the public good.

<sup>12</sup> [https://www.huffingtonpost.com/entry/the-climate-canaries-are-screaming\\_us\\_5a147457e4b0f401dfa7eaeab](https://www.huffingtonpost.com/entry/the-climate-canaries-are-screaming_us_5a147457e4b0f401dfa7eaeab)

<sup>13</sup> <http://www.sandiegouniontribune.com/news/science/sd-me-scripps-climatechange-20170914-story.html>



The “Jacobson” study a few years ago showed that NY could move to 100% clean energy by 2030 based on existing technology estimated the transition cost at around \$480 billion. While much of this involves redirecting existing funds from the fossil fuel industry to renewable energy, and routine expenditures already budgeted for system and distribution upgrades, it still requires new additional spending of billions of dollars a year.

We were pleased that last year in his State of the State the Governor announced that he had agreed to our recommendation for a study on how fast the state could technologically transition to 100% clean energy. The study is being conducted by NYSERDA and we have been told that they report will be out shortly. Once the science of how fast can NY to transition to 100% clean energy provides answers, then the state can debate the political and economic barriers that will have to be addressed in implementing such efforts.

### **Upgrade New York’s Performance on Renewable Energy**

NY’s track record on developing clean renewable energy has been pitiful since Governor Pataki first established a goal of 30% of the state’s electricity from renewables by 2015 (starting from a base of 19% from long existing hydro-electric). Despite the Governor’s proclamation that he is a national leader in renewables and climate change, Across the board New York has performed much worse than other states from Vermont and Massachusetts to Texas and California. After 15 years and billions of consumer dollars, New York has managed to only produce 3% of the state’s electricity supply from wind, solar and geothermal. And electricity only accounts for less than 25% of the state’s carbon footprint.

It has lagged way behind on energy efficiency and electric cars, and has accomplished little with respect to transportation and buildings, each of which accounts for about a third of the state’s carbon footprint.

Both California and New York have set goals to have 50% of it state’s electricity from renewable energy by 2030. While NY has accomplished very little, California recently announced that it expects to hit its target 10 years earlier by 2020.

**New York should establish a goal of 100% clean energy as soon as possible.** Earlier this decade scientists from Stanford and Cornell showed that it was possible for NY to provide 100% of its energy – not just electricity – from renewable energy by 2030.<sup>14</sup> That would be a good goal for New York to adopt. NYSERDA is conducting a study on how fast it is technologically feasible to move to 100% clean energy that will be released momentarily. The final budget agreement should work to make it a reality.

Our discussions with renewable energy representatives indicated that the economics of utility-scale renewables in New York at present is such that it can only be built if they have a contract from NYSERDA. The administration’s efforts to redesign the market is nowhere close to bearing fruit. To build additional large-scale renewables means more funding via NYSERDA. To build large renewable energy projects in New York takes more 6 years for the permit process; places like Kansas take less than a year.<sup>15</sup> Nearly 100 towns had imposed a moratorium on solar farms to figure out to deal with them through the zoning and planning process. The State must devote resources to solving this barrier.

We support the executive proposal for \$260 million to create 1,500 megawatts of energy storage capacity by 2025. We oppose the executive’s proposal to delay tax credits for two years for solar and electric vehicle

<sup>14</sup> <https://web.stanford.edu/group/efmh/jacobson/Articles/I/NewYorkWWSEnPolicy.pdf>

<sup>15</sup> <http://www.cjonline.com/news/local/state-government/2017-05-07/kansas-wind-power-takes-expected-continue-growing>

charging stations as a very misguided way to resolve the state's budget deficit. We should be increasing and accelerating such incentives for renewable energy. We oppose any decrease or diversion of RGGI funding.

### **Invest in Offshore Wind (OSW)**

NYS Should Commit to a Power Purchase Agreement of 5,000 MW of Offshore Wind by 2025, 10,000 MW by 2030. The Governor has proposed 800 MW over the next two years.

One of the state's major weaknesses on climate change has been its tepid support for off-shore wind. The Governor's long-awaited blueprint for off shore wind that came out a few weeks ago was a dud, undercutting the possibility of NYS benefiting from lower electric rates, job creation and economic development. His plan was so weak that within two weeks of taking office that Gov, Murphy of New Jersey issued an Executive Order<sup>16</sup> surpassing the Governor's anemic goal of 2,400 MW by 2030, with only a two-year commitment of Power Purchase Agreement for OSW of 800 MW. New Jersey's goals, while still too weak, were 50% higher. The Governor has also failed to deliver on his call for a multi-state regional agreement to accelerate the development of OSW.

The first major wind farm off of Long Island – the Saudi Arabia of off shore wind – will be built by StatOil, a Norwegian multinational company. Due to the lack of infrastructure investment in NY and the US in offshore wind, it is expected that the construction – and jobs – for the projected will be done in Europe.

Scientists agree that we cannot avoid catastrophic climate change without a major OSW program on the east coast. The Jacobson report on achieving 100% clean energy by 2030 called for 40% of the state's power to come from off shore wind.

The University of Delaware, which authored NYSERDA's prior report on OSW<sup>17</sup>, pointed out that the United States has moved backwards in the last decade with respect to wind due to overreliance on market forces. We agree with their assessment.

The NYSERDA report found that the best way to lower costs for offshore wind was to commit to OSW development at scale, rather than on a project by project basis. It concluded that costs could be lowered as much as 30%. Taking advantage of wind turbine innovations and other technology and industry advances could lower costs by about an additional 20 percent. The NYSERDA report's author added "well-designed policies and actions taken by New York, as well as by other states, can play an essential role in helping New York City and other U.S. East Coast population centers benefit from gigawatts of clean energy that could be generated by deploying wind turbines off the Atlantic coast."

Whatever state builds the first major offshore wind project is likely to attract the infrastructure investment in manufacturing, shipping, ports, and supply chain that will position it to be the center of the offshore wind build out along the east coast. NYPA funded studies show that a single OSW project could generate total economic activity of \$1 billion in sales, 8,700 job-years and \$610 million in wages for New York State. A 2014 study by Stony Brook University found that if 2,500 MWs of projects were developed, Long Island would get 58,457 construction and operations phase jobs, as well as approximately \$12.9 billion in local economic output.

New York's existing off shore wind blueprint is grossly inadequate to seize this golden opportunity.

<sup>16</sup> [http://nj.gov/governor/news/news/562018/approved/20180131a\\_eo.shtml](http://nj.gov/governor/news/news/562018/approved/20180131a_eo.shtml)

<sup>17</sup> <https://www.ceoe.udel.edu/File%20Library/About/SIOW/2016-06-ny-offshore-wind-cost-reduction-study-ff8.pdf>

## **Electric Cars, Mass Transit and Transportation**

Transportation is responsible for 40% of fossil-fuel based GHG emissions in the State.

The NYC transit system alone needs more than \$110 billion, and there are significant unmet needs statewide. GELF supports a wealth tax, a carbon tax, congestion pricing and an end to the \$15 billion annual rebate of the Stock Transfer tax to raise adequate funding for mass transit.

There are currently 25,000 EVs (Electric Vehicles) in New York State, with 1,700 charging stations<sup>18</sup>. The Multi-State ZEV Action Plan committed to 3.3 million EVs on the road by 2025 with 850,000 in NYS. New York State is striving to be ready to accommodate more than 30,000 plug-in electric vehicles by 2018 and 1 million by 2025 through Charge NY. In his State of the State, Cuomo proposed increasing the number of electric vehicle charging stations to 10,000 by 2021, and investing the \$130 million from the Volkswagen settlement in electric vehicles to replace diesel transit and school buses.<sup>19</sup> While we support these proposals, we oppose the Governor's idea to delay tax credits for charging stations as a way to close the state budget deficit.

Countries around the world are racing to phase out gasoline and diesel cars. China, the world's largest car market, is working on a plan to ban the production and sale of vehicles powered only by fossil fuels<sup>20</sup>. Norway has set that goal for 2025, India by 2030. France and the United Kingdom both announced this summer that they would ban the sale of new gas and diesel cars after 2040<sup>21</sup> as is true with half a dozen other countries. Paris has set of goal of 2030.<sup>22</sup>

Bloomberg New Energy Finance reports that electric vehicles will be cheaper than fossil fuel vehicles in the U.S. and Europe as soon as 2025.<sup>23</sup>

The Clean Air Act allows states to either follow the federal requirements or adopt California's vehicle emission regulations.<sup>24</sup> New York should thus work with California to adopt an accelerated time frame for the transition to all electric vehicles.

In September 2017, Mary Nichols, the head of California's Air Resources Board, suggested the state could move to set a date within the next decade for 100% Zero Emission Vehicles. Governor Jerry Brown has been asking her about a ban on gas- and diesel-powered cars announced recently by China.<sup>25</sup> California Assemblyman Phil Ting has introduced a bill that would ban the sale of new cars powered by internal-combustion engines after 2040.<sup>26</sup> Gov. Jerry Brown in January 2018 issued an executive order that commits the state to a goal of 5 million zero-emission vehicles on the

<sup>18</sup> <https://www.governor.ny.gov/news/governor-cuomo-announces-multi-state-plan-increase-number-zero-emission-vehicles-us>

<sup>19</sup> <https://www.governor.ny.gov/sites/governor.ny.gov/files/atoms/files/2018-stateofthestatebook.pdf>

<sup>20</sup> <http://money.cnn.com/2017/09/11/news/china-gas-electric-car-ban/index.html>

<sup>21</sup> Welsh, T., "France to ban sale of gas cars in favor of electric to meet Paris climate goals," Sacramento Bee, July 6, 2017, <http://www.sacbee.com/latest-news/article159944519.html>.

<sup>22</sup> <https://www.reuters.com/article/us-france-paris-autos/paris-plans-to-banish-all-but-electric-cars-by-2030-idUSKBN1CH0SI>

<sup>23</sup> Shankleman, J., "Pretty Soon Electric Cars Will Cost Less Than Gasoline," Bloomberg, May 26, 2017, <https://www.bloomberg.com/news/articles/2017-05-26/electric-cars-seen-cheaper-than-gasoline-models-within-a-decade>.

<sup>24</sup> U.S. Environmental Protection Agency, "Vehicle Emissions California Waivers and Authorizations," <https://www.epa.gov/state-and-local-transportation/vehicle-emissions-california-waivers-and-authorizations>.

<sup>25</sup> Kasler, D. and Sabalow, R., "No more gas or diesel cars in California? State considers ban," Sacramento Bee, September 17, 2017, [www.sacbee.com/news/local/transportation/article175740811.html](http://www.sacbee.com/news/local/transportation/article175740811.html)

<sup>26</sup> The state of California, Assembly Bill 1745, <https://a19.asmdc.org/sites/a19.asmdc.org/files/pdf/ab-1745-clean-cars-2040-fact-sheet.pdf>.

road by 2030 – up from a goal of 1.5 million EVs by 2025 - and includes a plan to spend \$2.5 billion in new funding to encourage motorists to buy them.<sup>27</sup>

## **Energy Efficiency**

NY's ranking on energy efficiency has been slipping in recent years, falling to 7<sup>th</sup> nationally. Massachusetts is the national leader.<sup>28</sup> NY scores particularly low when it comes to utilities, only getting 10 out of 20 points.

New York's current 2016-2018 utility energy efficiency targets are far below what the state Public Service Commission assumed in its white paper on the Clean Energy Standard (CES), and significantly lower than those of other nearby states—Massachusetts and Rhode Island—that lead in energy efficiency.

In January, the PSC issued decisions that held utilities' efficiency budgets and targets for 2017 and 2018 at the same, disappointingly low levels the PSC already set for 2016. In response, Synapse released a report titled *Aiming Higher*,<sup>29</sup> showing that these efficiency targets will leave untapped much of New York's vast efficiency potential. The report also estimated that by setting higher efficiency targets, the commission could help New Yorkers save roughly \$3 billion in electricity costs through 2030, and that each dollar that New York utilities spend on energy efficiency would yield \$1.65 in benefits for customers.<sup>30</sup>

In this 2018 State of the State, the Governor announced<sup>31</sup> a plan to create new energy efficiency targets and appliance standards. He directed NYSERDA and the PSC to propose new 2025 energy efficiency targets by Earth Day, April 22, 2018. With this announcement, the discussion should move from whether to set new targets to what the specific targets will be and how to hold utilities and other implementers accountable for meeting the targets.<sup>32</sup>

## **Buildings**

We support the efforts of the Renewable Heat Now campaign to accelerate the adoption of ground-source (geothermal) and air-source heat pumps in New York.<sup>33</sup> We support mandatory building retrofits to invest in cost-effective energy efficiency upgrades. We support amending state building codes to require all new buildings to have net zero greenhouse gas emissions.<sup>34</sup>

In Feb. of this year, NYSERDA issued Renewable Heating and Cooling Policy Framework: Options to Advance Industry Growth and Markets in New York. They came out in favor of cold-climate air source heat pumps (ccASHPs), ground source heat pumps (GSHPs, also known as geothermal heat

<sup>27</sup> <https://www.mercurynews.com/2018/01/26/brown-sets-goal-of-5-million-electric-vehicles-in-california-by-2030/>

<sup>28</sup> <http://aceee.org/sites/default/files/pdf/state-sheet/2017/new-york.pdf>

<sup>29</sup> <http://www.synapse-energy.com/sites/default/files/Aiming-Higher-NY-CES-White-paper-15-056.pdf>

<sup>30</sup> <https://www.nrdc.org/experts/jackson-morris/time-shore-energy-efficiency-ny>

<sup>31</sup> <https://www.governor.ny.gov/news/governor-cuomo-unveils-20th-proposal-2018-state-state-new-yorks-clean-energy-jobs-and-climate>

<sup>32</sup> <http://aceee.org/press/2018/01/new-york-governor-cuomo-announces>

<sup>33</sup> <http://renewableheatnow.org/>

<sup>34</sup> [https://newbuildings.org/code\\_policy/zero-net-energy-policies/](https://newbuildings.org/code_policy/zero-net-energy-policies/); and, [https://www.iea.org/publications/freepublications/publication/Building\\_Codes.pdf](https://www.iea.org/publications/freepublications/publication/Building_Codes.pdf)



pumps), and solar hot water (SHW).<sup>35</sup> This included a two-year \$15 million rebate program would provide about \$6,000 for a typical residential consumer for the installation of a ground-source heat pump.<sup>36</sup>

NYSERDA also will provide up to \$10.95 million in incentives to participating installers for the installation of program-qualified ASHP (Air Source Heat Pumps) systems in residential sites, including single-family and multifamily buildings. Incentives of \$500 per an installed program-qualified ASHP system are available. This was a good start but much more is needed.

Industry officials estimate to achieve the goal of a 40% reduction in greenhouse gas emissions, the state would need to convert around 126,000 houses a year to geothermal.<sup>37</sup> The most recent annual estimate was around 1,000.<sup>38</sup>

The state has had more progress with air source heat pumps but firm data figures are not available; NYSERDA's policy framework <sup>39</sup> cited above estimates that for 2013-2015, ASHPs sales totaled about 1.2% of single family homes, small commercial building and multi-family homes (at p. 17)

On Oct. 9, 2009, then New York State Governor David Paterson signed the Green Jobs/Green New York (GJGNY) bill into law. Supporters projected that the bill would 'green' one million homes throughout the state, and create 14,000 new jobs. Six years past its passage, the legislation's results are mixed at best.<sup>40</sup> Only a few thousand homes were retrofitted, and it's estimated that the program yielded only a thousand or so new jobs—1,069 as of two summer ago, according to state officials. The implementation of this program unfortunately has been impeded by the Cuomo administration, utilities and the financial community. The legislature needs to take action to enable it to achieve its goals.

## **Enact a State Carbon Tax; Include Funding in State Budget for a Study**

### **Make Polluters Pay**

New York needs to adequately price carbon to reflect the true economic, health and environmental costs associated with its use. New York should enact a carbon (greenhouse gas) tax or fee to accomplish this purpose (this needs to include methane).

The Governor used the social cost of carbon to justify his \$7.6 billion bailout of three small upstate nuclear plants. This had led the NYS Independent Systems Operator to seek similar handouts for other electric producers, a proposal which the Governor has embraced through the Public Service Commission.<sup>41</sup> The prime purpose for carbon pricing is to make polluters pay for the damages they

<sup>35</sup> <https://www.governor.ny.gov/news/governor-cuomo-announces-proposal-15-million-rebate-program-renewable-heating-and-cooling>

<sup>36</sup> <https://www.nyserdera.ny.gov/About/Newsroom/2017-Announcements/2017-05-30-NYSERDA-Launches-15-Million-Initiative-to-Spur-GSHP-Market>

<sup>37</sup> <http://renewableheatnow.org/renewable-heat-now-policy-platform/>

<sup>38</sup> <https://nyacknewsandviews.com/2017/11/earth-matters-geothermal-heating-cooling/>

<sup>39</sup> Renewable Heating and Cooling Policy Framework: Options to Advance Industry Growth and Markets in New York. NYSERDA Feb. 2017

<sup>40</sup> <https://www.nyserdera.ny.gov/Researchers-and-Policymakers/Green-Jobs-Green-New-York/GJGNY-LMI-Working-Group>, see chart page 7

<sup>41</sup> <https://www.rtoinsider.com/nyiso-new-york-carbon-pricing-80527/>

cause while accelerating the transition to clean energy sources by making fossil fuels reflect their actual costs. The Governor is doing none of this.

The biggest obstacle to clean energy is that the market prices of coal, oil and gas don't include the true costs of carbon pollution. A robust and briskly rising carbon tax will transform energy investment, re-shape consumption, and sharply reduce the carbon emissions that are driving global warming.

A carbon tax is an "upstream" tax on the carbon content of fossil fuels (coal, oil and natural gas) and biofuels. A carbon tax is the most efficient means to instill crucial price signals that spur carbon-reducing investment. A carbon tax can also be used to recapture some of the costs pushed on to taxpayers and consumers from burning fossil fuels,

The International Monetary Fund estimates that worldwide we provide \$5.3 trillion in annual subsidies to the fossil fuel industry. We need to stop paying to make the world inhabitable for humans. In New York, it is estimated that allowing the burning of fossil fuels increases health care costs by \$30 billion or more while leading to at least 3,000 annual deaths from air pollution.

It would be better to enact a robust national carbon tax. However, since the present Congressional gridlock on climate change makes this unlikely, New York should take the lead and enact a state carbon tax. In Canada, British Columbia has successfully implemented a provincial carbon tax. The tax has helped BC reduce its carbon emissions 3.5 times more than the rest of Canada while their economy performed slightly better than the rest of the country.

There is significant interest in the northeast in a regional carbon tax. Northeastern states including New York recently announced their intention to examine the possibility of some form of regional approach to address transportation / gas under the Climate and Transportation Initiative.<sup>42</sup> Several years ago Gov. Cuomo had publicly raised the possibility of a regional gas tax to support mass transit.

GELF helped draft carbon tax legislation<sup>43</sup> which has been introduced. We actively support A107(Cahill) / S2846 (Parker). We are also supportive of the polluter pay carbon tax proposal that has been developed by NY Renews, including its proposals for investment in a Just Transition and environmental justice.

In the Cahill / Parker bill, we selected the various options included in the bill after surveying several hundred climate change activists – we adopted the positions with the most support.

The proposed carbon tax would start at \$35 a ton and then increase in annual increments of \$15 a ton. 60% of the revenues would be rebated to low and moderate income consumers. The remaining forty percent will support the transition to one hundred percent clean energy in the state, to support mass transit to reduce carbon emissions, and to improve climate change adaptation. Such funds shall include payments and subsidies for renewable energy, energy conservation and efficiency measures, improvements in infrastructure, improvements in mass transit capacity, agricultural adaptation measures, protection of low-lying areas including coastlines, and emergency responses to extreme weather events.

At the base rate of \$35, according to Prof. Sara Hsu of SUNY New Paltz, the revenues would amount to over \$3.5 billion. In Year Two of implementation, with an increase of \$15 per ton, the revenue would be \$6.2 billion, in Year Three, \$7.9 billion, in Year Four, \$9.5 billion, and in Year

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<sup>42</sup> <http://www.transportationandclimate.org/northeast-and-mid-atlantic-states-seek-public-input-they-move-toward-cleaner-transportation-future>

<sup>43</sup> [http://assembly.state.ny.us/leg/?default\\_fld=&leg\\_video=&bn=A00107&term=&Summary=Y&Text=Y](http://assembly.state.ny.us/leg/?default_fld=&leg_video=&bn=A00107&term=&Summary=Y&Text=Y)

Five, \$11 billion. At the last point, revenue would amount to \$14.3 billion. It is estimated that the initial carbon price of \$35 a ton would increase the cost of gasoline by 35 cents a gallon. At \$180 a ton, the cost would rise by \$1.58 per gallon.

We recognize there are differences of opinions as to how to best invest the revenues: offset the regressive nature of any energy tax; do a 100% rebate of the tax to consumers (e.g., 100% fee and dividend); invest in the transition to renewable energy; and to meet other social needs such as job creation. The issue of what revenue options the legislature agrees to is less important than adopting a carbon price high enough to effectively reduce the amount of greenhouse gases emitted.

As an interim step, we urge the legislature to include funding in the state budget for a study of the impact and potential of the various levels and variables for a state carbon tax. Oregon and Massachusetts have conducted such studies. A 1919 / S4598<sup>44</sup>

Oregon's 2013 Carbon Tax and Shift: How to Make It Work for Oregon's Economy by economists at Portland State University's Northwest Economic Research Center examines a carbon tax based on British Columbia's model. Like BC's, the carbon tax examined for Oregon would be (largely) revenue-neutral: one scenario applies 70% of the tax revenues to cut corporate taxes, 20% to cut personal income taxes, and 10% for reinvestment in industrial energy efficiency programs; the other apportioned 50% of the revenues to cut corporate taxes, 25% to cut personal income taxes, and 25% for industrial and residential energy efficiency and transportation infrastructure.

The study concluded that a tax of \$10 per ton would not help Oregon reduce greenhouse gas emissions below 1990 levels. At \$60 per ton, a carbon tax would begin reducing emissions below 1990 levels almost immediately by cut emissions by 26 percent and would raise \$2.35 billion in new taxes. The study's authors dismiss the drag factor at even the highest level — \$150 per ton — as "small." A \$60 per ton carbon tax would raise the price of gas by about 6 cents. Natural gas prices would rise 18 percent and electric prices would rise 9 percent to 30 percent, depending on regional variability.

New York already has a limited carbon pricing scheme through the Regional Greenhouse Gas Initiative for electrical production. However, the Congressional Research Service<sup>45</sup> concluded that the pricing was set too low to have any significant impact on reducing carbon emissions. It is presently around \$6 a ton. The emission reductions resulted from invested the proceeds from auctioning the carbon permits into renewable energy. The recent effort to reform RGGI regionally to set higher goals fell far short of what advocates were calling for but some highest goals for carbon emission reductions was agreed to. There is the possibility that RGGI may expand to gasoline as other cap-and-trade programs have done. Cap and trade programs however are subject to market manipulation and often shift the pollution burden to poorer communities and nations, which is why they were condemned by Pope Francis.

### **Oppose Reappropriation of \$88 Million for New Fracked Gas Turbines for Empire State Plaza**

GELF opposes the appropriation of \$88 million for the construction of a "fracked" gas power plant at Sheridan Avenue in Albany to provide heat and power for a Microgrid serving the Empire State Plaza. The current proposal increases New York's dependency on fossil fuels, perpetuates an inherently inefficient method of heating and cooling with steam, exacerbates climate change, and subjects a low-income community of color to decades of continued pollution.

<sup>44</sup> [http://nyassembly.gov/leg/?default\\_fld=&leg\\_video=&bn=A01919&term=2017&Summary=Y&Memo=Y&Text=Y](http://nyassembly.gov/leg/?default_fld=&leg_video=&bn=A01919&term=2017&Summary=Y&Memo=Y&Text=Y)

<sup>45</sup> <https://fas.org/sgp/crs/misc/R41836.pdf>

If funds are appropriated for an Albany Microgrid, it should be conditioned upon the issuance of a new Request for Proposals to solicit renewable energy alternatives that do not result in more gas being burned in Sheridan Hollow. This does not preclude the immediate replacement of outdated emergency diesel generators and changes to testing protocols that would reduce their run time. Oklahoma and Colorado have both converted their state capitol buildings from steam to geothermal energy, and Michigan is now in the process.

Pursuing a "fracked gas" solution for the capital of New York does not reflect well upon the state that "banned fracking." However, a renewable energy solution incorporating geothermal technology would showcase New York as a climate leader and serve as a model for the nation.

### **End the \$7.6 Billion Tax for Nuclear Subsidies**

We urge you to direct the Public Service Commission and other relevant state entities to halt the plan to mandate \$7.6 billion in ratepayer subsidies to keep old, unsafe, uncompetitive nuclear power plants open in upstate New York. Energy efficiency measures and newer, cleaner, renewable sources of power are more cost-effective, better for human and environmental health and create more jobs.

The Nine Mile Point, FitzPatrick and Ginna nuclear plants -- like the Indian Point power plant you negotiated to shut down by 2021 -- are inefficient and dangerous power sources and should be decommissioned. Most of these plants were built in the Vietnam era. New York's overburdened ratepayers simply should not have to fork over billions of dollars in higher utility bills to subsidize such aging, economically uncompetitive nuclear plants.

Utility reports filed with the state show that more than 800,000 consumers in New York State are already in arrears on their utility bills. Many more New Yorkers currently struggle to pay electric rates that are among the highest in the nation. Increasing the monthly charges for these vulnerable New Yorkers will only make a bad situation worse.

Higher utility bills will also place a strain on businesses, schools, charitable organizations and local governments. New York communities are already straining against the limits of the local property tax cap. We cannot afford to see our municipal energy costs go up even further to bail out an industry that brings no economic development to our communities. We want to keep this money in our own communities to support our own local needs, including our own municipal energy efficiency and clean energy projects.

New York State's proposed multi-billion-dollar subsidy, which is essentially a "ratepayer tax," is also a misallocation of resources that New York should be investing in energy efficiency and cleaner, safer alternative energy sources.

The \$7.6 billion ratepayer-funded subsidy to keep nuclear plants open will save only about 2,000 jobs in one region of the state, and only until the subsidy expires in 2029. A job creation or retention initiative financed statewide by consumers should have a positive impact throughout the state, not only one community.

Unfortunately, the Public Service Commission, which approved the \$7.6 billion ratepayer-funded bailout without any legislative involvement or approval, failed to evaluate alternative proposals for how most effectively to create jobs, help local taxpayers and promote clean energy. Further, in a matter of weeks, the price tag for this bailout soared from \$59 million to \$7.6 billion – a staggering sum, and far more than the state is investing in renewable energy.

In July of 2017, Amory Lovins, who served as a consultant to the state in its REV process, released an analysis which debunks the notion that highly unprofitable, economically distressed nuclear plants should be further subsidized to meet financial, security, reliability and climate goals. The analysis showed that closing costly-to-run nuclear plants and reinvesting their saved operating costs in energy efficiency provides cheaper electricity, increases grid reliability and security, reduces more carbon, and preserves (not distorts) market integrity—all without subsidies.<sup>46</sup>

### **Invest in a Just Climate Transition**

GELF supports several budget proposals made by NY Renewables.

1. Direct NYSERDA to ensure that RGGI revenue and Clean Energy Fund proceeds prioritize frontline, environmental justice, and disadvantaged communities, with at least 40% of these resources dedicated to projects that directly benefit the identified communities;
2. Ensure that new and existing investments in climate programs effectively provide opportunities for low income individuals and disadvantaged communities to attain adequate funding for the implementation of energy efficiency, renewable energy, distributed energy, and resilient energy projects.
3. Access and maximize federal funding opportunities for the development of critical renewable energy infrastructure. For example, fund proposals to increase clean, renewable energy security and energy storage;
4. Ensure that all communities experiencing permanent power plant retirements have the resources they need to make just transitions, including budget and property tax relief for municipal school districts through the education funding formula;
5. Ensure full funding and implementation of the Green Jobs Green New York Act, and keep interest rates low and accessible to middle income New Yorkers;
6. Fund the Department of Environmental Conservation, and other relevant agencies, to begin working with stakeholders on:
  - a. Regulatory efforts to identify disadvantaged communities bearing the greatest burdens of climate change and fossil fuel pollution, based on metrics including public health problems, socioeconomic indicators, environmental pollution, and climate vulnerability, developed with input from stakeholders, especially those representing the communities likely to be identified;
  - b. An equity analysis of climate investments regarding the specific needs of disadvantaged communities, including improved transparency at all agencies implementing climate programs;
  - c. Making recommendations for regulatory measures to maximize reductions of both greenhouse gases and co pollutants in Disadvantaged Communities,
8. Develop a statewide support plan for community driven Just Transition processes to identify the needs – and the resources necessary to address those needs – of whole communities impacted by

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<sup>46</sup> <https://www.rmi.org/about/news-and-press/press-release-subsidizing-unprofitable-nuclear-plants-not-solution-grid-reliability-security-carbon-emissions/>



the shift away from a fossil fuel based economy. A Just Transition plan should ensure that workers in, and communities home to, fossil fuel related industries have an opportunity for leadership in the regenerative energy economy, which includes pathways for good paying jobs with fair labor standards.

### **End Fossil Fuel Subsidies in the NYS Budget**

We support legislation by Sen. Krueger and As. Cahill ((S6881/A8675) to identify and eventually eliminate the \$1.5 billion in fossil fuel tax expenditures in the NYS budget. The legislation would require the Governor to submit an annual analysis of all fossil fuel related tax expenditures, including recommendations regarding continuation, modification or repeal of some of the worst offenses. It also implements a 3-year sunset provision for all current and future fossil fuel related tax expenditures. The state-level measure is the first in the country to specifically target fossil fuel tax subsidies and create a regular public review process.<sup>47</sup>

### **Divest Public Funds from Fossil Fuels (A8011 / S5873)**

We urge that language to require the state to divest its pension funds from fossil fuels be included in this year's state budget.

New York State's pension funds should cease making any new investments in fossil fuel companies and completely divest from them within 5 years. It should immediately divest from coal and from ExxonMobil, which is being investigated by the State Attorney General for allegedly deceiving the public and investors about the reality of climate change.

A study commissioned 2 years ago by 350.org for a Senate minority forum on divestment found that NY had divested from fossil fuels when it was first requested to do, the state pension fund would be worth an additional \$5 billion.<sup>48</sup>

We agree with the statement released by Governor Cuomo in December 2018 that “moving the Common Fund away from fossil fuel investments will protect the retirement savings of New Yorkers.... With billions of public employee dollars invested in the fossil fuel industry, and nearly \$1 billion invested in ExxonMobil alone, the Common Fund holds increasingly risky financial investments for New Yorkers, particularly as both New York State and the world back away from the use of fossil fuel as a primary energy source. For example, just last week the World Bank announced that it will end financial support for oil and gas exploration within the next two years, an announcement that itself comes on the heels of recent action by the Norwegian sovereign wealth fund, the largest fund in the world, to move away from fossil fuel investments.”<sup>49</sup>

The Governor's call for the state to divest helped persuade NYC Comptroller Scott Stringer to change his position on divestment and to join in the historic announcement with Mayor De Blasio, Public Advocate Tish James and union representatives on the pension board to support divesting

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<sup>47</sup> <https://www.nysenate.gov/newsroom/press-releases/liz-krueger/senator-krueger-and-assemblymember-cahill-announce-first-nation>

<sup>48</sup> <https://cleantechnica.com/2016/02/29/new-york-state-pension-funds-lost-5-3-billion-fossil-fuel-holdings-3-years/>

<sup>49</sup> <https://www.governor.ny.gov/news/governor-cuomo-unveils-9th-proposal-2018-state-state-calling-nys-common-fund-cease-all-new>

the city pension fund from fossil fuels.<sup>50</sup> NYC's announcement attracted international interest and hopefully will be a turning point in the world's efforts to avoid catastrophic climate change.

"The dam has broken," said 350.org co-founder Bill McKibben. "After years of great activism, New York has taken a massive step towards divesting from fossil fuels. Coming from the capital of world finance, this will resonate loud and clear all over the planet. It's a crucial sign of how fast the financial pendulum is swinging away from fossil fuels."

Since the divestment campaign started 5 years ago, more than \$6 trillion has been divested from worldwide.

Hurricane Sandy decimated the New York City and Long Island areas, causing \$65 billion in damage. Sandy was fueled in part by Atlantic waters that were 5 degrees warmer than average, a result of human-induced climate change. And yet, New York City's and State's pension funds for public employees are all invested in fossil fuel companies that dump carbon into the atmosphere for free, and rig the political system so that they can continue to do so.

As McKibben has noted, if it is wrong to wreck the climate, then it is wrong to profit from that wreckage. After Hurricane Sandy, New York City should be a shining light in the fight to combat climate change — to do that, it's pension funds must freeze and divest from fossil fuels. As of March 2013, almost \$5 billion of New York State pension funds are invested in coal, oil, and gas out of a total of \$160.7 billion.

Divesting all fossil fuels from the New York State pension fund is an act of long-term fiduciary responsibility that will protect the well-being of New York State's pensioners and citizens. We should require SUNY and CUNY to divest from the top 200 fossil fuel companies in the university's college portfolios.

Financial analysts and experts are increasingly worried about the risk of a carbon bubble that will arise if coal, oil and gas reserves become stranded assets. If governments meet their commitment to keep global warming below 1.5°C, they will need to pass regulations that force fossil fuel companies to keep 80% of their fossil fuel reserves underground. The accessibility of those reserves is a major factor in determining these companies' share price. Once the reserves are marked as unburnable, the value of the fossil fuel industry could plummet, to the tune of trillions of dollars.

The State has a fiduciary responsibility to protect the retirement funds of public workers from risky investments. Investing in fossil fuels poses increasing financial risk and loss to the CRF, thus its beneficiaries. The price of fossil fuels dropped after the world leaders at the COP 21 meeting in Paris agreed that the era of fossil fuels had to end.

Falling coal and oil prices, along with renewables now becoming cheaper than burning greenhouse gases, highlights the financial case for rapid divestment. Investors are increasingly voicing their concerns about the fossil fuel industry's long term financial viability, and opposing new capital expenditures aimed at discovering new coal, oil and gas reserves. Investors are concerned about the increasing action by governments' worldwide to restrict and tax the use of fossil fuels.

The State Comptroller has resisted divestment, arguing for shareholder advocacy instead. Certainly, it is helpful to use the voting rights of pension to move companies to adopt more

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<sup>50</sup> <http://www1.nyc.gov/office-of-the-mayor/news/022-18/climate-action-mayor-comptroller-trustees-first-in-the-nation-goal-divest-from#/0>

environmentally responsible practices. The comptroller should continue to lead shareholder advocacy campaigns to set greenhouse gas emission goals, improve energy efficiency across operations and source more renewable energy. But, it is extremely unlikely that a board of fossil fuel company is going to agree to stop the production of fossil fuels given that it is their core business. Shareholder advocacy is not an effective tool for changing the overall orientation of industries whose business models depend on producing fossil fuels.

### **Farmer Tax Credit for Regenerative Agriculture (A3281)**

We support the legislation by Assemblymember Barrett to create a new financial incentive to farmers for land management practices which help improve soil health and reduce greenhouse gas emissions, making New York a leader in promoting new agricultural strategies that combat climate change. Last year the legislature included \$50,000 in the state budget to study the issue.

Climate-smart land management practices improve soil resilience and increase productivity for our state's farmers while simultaneously addressing the state's climate change goals. The aim of a statewide carbon farming initiative is twofold: as a land stewardship program, it would improve soil health and productivity by holding nutrients in place; as a climate-smart initiative it would mitigate carbon's release into the atmosphere as carbon dioxide (CO<sub>2</sub>). Carbon dioxide contributes to climate change as a greenhouse gas by trapping heat in the atmosphere.

A tax credit for farmers who practice land management strategies which store, or sequester, carbon in the soil is a new model for combatting climate change. Reductions in net CO<sub>2</sub> emissions can be quantified by existing methods for measuring air pollution, especially the USDA's COMET-Planner software which was developed following the enactment of the 2014 federal Farm Bill. New York would be the first state to offer this type of tax credit, specifically for carbon farming, to all taxpayers who make farm products and not only the largest agricultural businesses.

By using no-till systems, planting cover crops, trees and perennial forages, and managing compost application, farmers can see improvements in water holding capacity, nutrient storage, and reduced erosion. All of these farming practices have the collateral benefit of sequestering carbon in the soil, thereby reducing its release into the atmosphere as CO<sub>2</sub>. The carbon farming program outlined would incentivize farmers who are currently using these strategies to continue them and would encourage others to undertake the prescribed soil health methods now widely accepted as beneficial not only to productivity but for the reduction in greenhouse gases.

In general, more attention needs to be paid to greenhouse gas emissions from agriculture. According to the EPA, Greenhouse gas emissions from agriculture come from livestock such as cows, agricultural soils, and rice production account for about 9% of the country's carbon footprint. Changing weather patterns will also pose significant challenges in growing food crops, including changes in growing seasons, rainfall patterns, and spread of insects.

### **Enact a Statewide Ban on Plastic Bags**

The state budget should include a ban on all plastic bags at retail outlets, regardless of thickness, and a fee for any other single use bag distributed by the store.

It was very disturbing that last year the Governor and State legislature overrode the right of a local government – in this case New York City – to adopt rules that help reduce litter, reduce taxpayer costs and protect the environment. Meanwhile plastic bag laws in a dozen other New York communities were allowed to remain in effect, including a similar plastic bag fee law that took effect in Suffolk County on January 1, 2018.

I organized one of the first forums in New York City five years ago, calling for a ban on plastic bags. We initially called for an outright ban. However, the legislation was repeatedly rewritten to placate local concerns and due to legal restrictions on city legislative authority. Among the compromises that were agreed to by Lander and the coalition were: doing a fee on plastic bags rather than a ban; exempting low-income consumers (e.g., using food stamps / SNAP and/or WIC); giving the fee to the store owners rather than the city; lowering the fee from 10 cents to 5 cents; and, delaying implementation of the enacted law until Feb. 15, 2017. Mayor Bloomberg initially proposed a 6 cents fee on plastic bags back in 2008.

Plastic bags are a financial and environmental disaster. New Yorkers dispose of 9.37 billion carryout bags per year, the vast majority of which are not recycled. New York City pays an estimated \$12.5 million to transport an estimated 91,000 tons of plastic and paper carryout bags to landfills in other states each year. Plastic bags jam expensive machinery at recycling plants and contaminate the recycling stream, increasing costs. They are a major source of litter everywhere as the wind carries them even into wilderness areas and they end up as a major pollution source in our oceans.

One reason to get rid of plastic bags is to reduce the use of fossil fuels that go into their manufacture.

Plastic bags never biodegrade, but they do breakdown. As they do so, the toxic additives they contain—including flame retardants, antimicrobials and plasticizers—are released into the environment. Many of these chemicals may disrupt the endocrine system. Plastic bags are especially harmful to marine animals, often choking them. Fish eat the colorful plastic bits and in a few years one out of three pounds of fish harvested will be plastic by weight. For sea turtles, the plastic blocks their digestive tract and the food that is trapped releases gases that render them buoyant, and unable to dive for food.

Among the NYS communities already banning plastic bags are New Paltz; East Hampton and South Hampton, on Long Island; and Larchmont, Rye and Mamaroneck in Westchester County. Suffolk County and the City of Long Beach have enacted plastic bag fees.

According to Cuomo Administration, “residents use 23 billion plastic bags annually. A significant number of these bags make their way into the environment causing litter and damaging wildlife, which can be seen within our waterways, along our streets and in our oceans and lakes. Moreover, these bags do not biodegrade – they persist for years. The New York City Department of Sanitation currently estimates that it collects an average of 1,700 tons of plastic bags per week, costing \$12.5 million per year in disposal expenses.<sup>51</sup>

The problem is not unique to New York; it is a global problem. According to a recent report, experts estimate that over eight million metric tons of plastic waste ends up in the world’s oceans each year, and that amount is likely to increase dramatically over the next decade unless nations act.<sup>52</sup>

“EPA estimates that 80% of plastic pollution in the ocean originates as land-based trash which includes plastic bags. In 2010, approximately 4 to 12 million metric tons of plastics found their way into aquatic environments. It is estimated that by 2050, there will be more plastic by weight in the

<sup>51</sup> Governor Cuomo, News Release, “Governor Cuomo Announces Launch of Statewide Plastic Bag Task Force,” March 12, 2017, also, [http://www.dec.ny.gov/docs/materials\\_minerals\\_pdf/dplasticbagreport2017.pdf](http://www.dec.ny.gov/docs/materials_minerals_pdf/dplasticbagreport2017.pdf) pp. 4,25 <https://www.governor.ny.gov/news/governor-cuomo-announces-launch-statewide-plastic-bag-task-force>.

<sup>52</sup> Schwartz, J., “Study Finds Rising Levels of Plastics in the Oceans,” *The New York Times*, February 12, 2015, [https://www.nytimes.com/2015/02/13/science/earth/plastic-ocean-waste-levels-going-up-study-says.html?\\_r=0](https://www.nytimes.com/2015/02/13/science/earth/plastic-ocean-waste-levels-going-up-study-says.html?_r=0).

world's oceans than fish. Plastic bags also interfere with wastewater treatment plants, pose a threat to fish and wildlife, and break down into microplastics. These microplastics, which can be millimeters to micrometers in size, can absorb toxins and leach chemicals. When ingested by wildlife, these chemicals and toxins bioaccumulate up the food chain to humans.”<sup>53</sup>

### **Enact the Food Recovery and Recycling Act**

More than 400,000 tons of organic material - edible food and food scraps - are generated annually by New York's large generators and landfilled. With 3 million New Yorkers suffering from hunger, keeping food out of our landfills NOW is not only feasible but necessary.

The Food Recovery and Recycling Act (FRRA) would require the state's largest food waste generators – supermarkets, hospitals, colleges, large restaurants - to reduce their food waste by first donating any excess food to food rescue organizations and then recycling their food scraps. Only businesses that generate more than 2 tons (4,000 pounds) of food waste weekly would be covered, and only if there is a food waste recovery business within 40 miles of their establishment.

The proposal would not apply to New York City, which has its own existing requirements. It does not apply to elementary and secondary schools statewide. Food waste generators may apply for hardship waivers based on cost, capacity of nearby recyclers and unique circumstances. The program will promote new businesses and jobs to handle the food waste recovery.

FRRA will provide surplus food to hungry people, convert organic waste into valuable compost, and drive economic development in NYS. It will create jobs, enhance efficiency and reduce greenhouse gas emissions by diverting organic material from our landfills.

Approximately 1,700 retailers, institutions, hospitality and restaurants will be affected. More than \$8 million dollars will be committed over the next three years to generators, food rescue organizations, and municipalities to help them prepare.

- Food Scraps Diversion: Empire State Development (ESD) will provide \$4 million to large generators for equipment and other infrastructure support.
- Municipal Recycling: NYS Department of Environmental Conservation (NYSDEC) will provide \$1.2 million to villages, towns, cities and counties.
- Food Rescue Infrastructure: ESD and NYSDEC will provide \$2.8 million to food banks.

In the United States, almost half of all food sold is thrown away.<sup>54</sup> The result of this waste, which happens at every stage of the journey from farm to fork, is that millions of pounds of food end up rotting in landfills, releasing methane, a highly potent greenhouse gas.

Americans waste about 25 percent of the food we purchase. The value of uneaten food per US household is almost \$1000 per year. Most of our wasted food ends up in a landfill where methane gas is generated as it decomposes in the absence of air. Methane, a potent greenhouse gas, contributes to climate change. Landfills are the third largest source of methane in the US. In the United States, food waste is estimated at between 30-40 percent of the food supply. This corresponded to approximately 133 billion pounds and \$161 billion worth of food in 2010.<sup>55</sup>

<sup>53</sup> “New York State Plastic Bag Task Force Report: An Analysis of the Impact of Single-Use Plastic Bags, “ January 13, 2018, [http://www.dec.ny.gov/docs/materials\\_minerals\\_pdf/dplasticbagreport2017.pdf](http://www.dec.ny.gov/docs/materials_minerals_pdf/dplasticbagreport2017.pdf) , p. 2

<sup>54</sup> <https://www.theguardian.com/environment/2016/jul/13/us-food-waste-ugly-fruit-vegetables-perfect>

<sup>55</sup> U.S. Department of Agriculture, Office of the Chief Economist, <https://www.usda.gov/oce/foodwaste/faqs.htm>.



In New York, food makes up 18% of the municipal solid waste stream. An estimated 4 million tons of excess food, edible food not sold or used by its generator, and food scraps, inedible food and edible food not donated, are generated annually in New York State. Each year, more than 97 percent of these food wastes are landfilled or combusted increasing emissions of harmful methane gasses.<sup>56</sup>

#### FEED OUR HUNGRY PEOPLE:

The Hunger Action Network of NYS, food recovery programs and local food banks support this Act. There are 3 million hungry residents in NYS and 37% are children. By rescuing 5% of food waste from large generators, 20% more edible wholesome food would be available at food banks – that is nearly 670,000 meals every week. Funding will be made available to assist the food banks and emergency food programs to obtain the equipment needed to ensure safe transport and delivery of such donated food.

#### SUPPORT OUR GREEN BUSINESSES:

Assistance in food waste prevention, recovery, and recycling will be made available to all generators. It will help them refine purchasing methods, improve storage techniques, train staff and get creative with business practices. Organizations such as the New York State Pollution Prevention Institute (NYSP2I) provide technical assistance for large generators, haulers, food recovery, and food waste recycling facilities. Additionally, an online Clearinghouse was developed to support food related businesses seeking to divert food waste from landfill.

#### SAVE OUR FARMERS MONEY:

Composting is cost-effective. As a valuable soil enhancer, it can improve plant growth, reduce water use, and replace costly fertilizers. In addition, large amounts of low-moisture content food like bakery waste, as well as high-moisture food like vegetables and fruit, are also suitable for animal feed, which cuts back on farm feed bills, often the most expensive farm input.

#### PROTECT OUR ENVIRONMENT:

The vast majority of generated waste is disposed of in landfills where it breaks down and releases methane, a potent greenhouse gas. Recycling, rather than landfilling this waste, could have the same greenhouse gas reduction benefit as removing more than 25,000 cars from the road.

#### **Increase Investment in Water Infrastructure**

Clean water is essential for life and one of the world's most precious resources. While federal and state laws are supposed to protect the public, too often public and private drinking water sources continue to face threats. Those threats include aging, crumbling water infrastructure that may further contaminate water supplies and possible funding cuts that may undermine the federal government's monitoring and enforcement activities.

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<sup>56</sup> Biomass Magazine, by NYSERDA, <http://biomassmagazine.com/articles/14278/nyserda-ny-food-waste-diversion-could-net-22-million-yearly>.

The executive proposal continues annual appropriations of \$175 million in federal funding and \$35 million in State funding for the Clean Water State Revolving program which allows municipalities to apply for zero or low-interest loans for wastewater infrastructure and other clean water projects. The Executive proposal would continue to allocate funds from the Clean Water Infrastructure Act of 2017 (CWIA), a \$2.5 billion appropriation made for water infrastructure. This appropriation includes \$1 billion for clean water and drinking water infrastructure grants which municipalities can use for the required local match to loans from the State Revolving Fund.

We have a number of specific budget recommendations:

1. Provide \$25 million in funding for Hoosick Falls to hook up to a new, clean water source, such as the Tomhannock Reservoir. It has been two years since Hoosick Falls learned of their water contamination, yet they still do not have a new water source. While the community does have a filtration system, residents live in fear that the filtration system could fail, and the community will be unable to escape the stigma of polluted water until they have a new, clean water source. This should be achievable given the \$100 million funding line within the CWIA for water infrastructure projects that may not ordinarily qualify for state aid.
2. Provide funding for Newburgh to remain on the Catskill Aqueduct. The polluter responsible for Newburgh's PFOS pollution, the U.S. Department of Defense (DOD), has yet to agree to stop polluting, to clean up its pollution, or pay for the costs of its pollution.

Additionally, residents are deeply concerned that there may be other contaminants in the city's reservoir, Washington Lake in New Windsor. Until DOD stops polluting, and there is a greater understanding of what is in Washington Lake, the city should remain on the Catskill Aqueduct. This could also be funded, if needed, through the \$100 million line in the CWIA.

3. Provide staff funding for the Department of Environmental Conservation (DEC). The final state budget for FY2018-2019 budget should restore DEC staff levels to address the losses sustained at the agency and ensure the state's laws and protections can be fully enforced.

Communities like Hoosick Falls and Newburgh are dependent upon a fully-funded DEC to make sure there is adequate outreach in their communities and there are enough cops on the beat to enforce regulations.

4. Pass legislation that requires testing for private wells. The Governor's proposed budget for SFY 2017-18 contained a proposal for private well testing. Unfortunately, that legislation did not make it into the final budget. While public water supplies are regularly tested for contaminants and toxics, and the results are sent to each ratepayer and made publically available, private groundwater wells are not held to the same standards. As a result, homebuyers have no assurances of water quality, and the public does not get the full picture of local water quality issues. Last year's water quality hearings promised New Yorkers that this would get done – 2018 is the year to do it.

The \$2.5 billion commitment in FY2017-18 budget is substantial, but only a start to fully address the staggering threats to New York's drinking water supplies. We urge action to create a "Clean Drinking Water Bond Act," which could provide billions more in bonding towards replacing outdated water infrastructure, septic system replacement, and mitigating water systems to reduce exposure to emerging contaminants. We urge that the bonding authority be paid off with an assessment on companies which produce pollutants that threaten drinking water supplies.

FY2017–2018 state budget contained a series of amendments to state law aimed at correcting certain inadequacies of New York’s current regulatory framework. Those amendments include the Emerging Contaminant Monitoring Act, which establishes a New York State monitoring program for emerging contaminants; and the Clean Water Infrastructure Act, which allocates funds for a number of purposes.

The FY2017–2018 state budget included \$20 million for the replacement of lead drinking water service lines. Replacing lead service lines is an important undertaking, but the immense scope of that project makes it impractical as a near-term solution. The \$20 million allocated in the budget covers the expected cost of replacing about 8,000 lines,<sup>57</sup> or about half the number of lead service connections in Syracuse alone.<sup>58</sup> Absent any plan in the immediate-term to invest the estimated billions of dollars it would take to replace all of the lead connections in New York State, policymakers need to do a better job to control the lead content of water that we anticipate will flow through lead plumbing. Alongside replacing lead pipes on an ongoing basis, New York must improve monitoring and enforcement of lead and copper regulations, at daycare centers, in schools, and in community water systems throughout the state.

According to a 2008 assessment by the N.Y. Department of Health, the estimated cost of repairing, replacing and updating New York's drinking water infrastructure was \$38.7 billion over the next 20 years plus an additional \$36.2 billion for municipal waste-water infrastructure.<sup>59</sup> That estimate is now almost a decade old and the needs have continued to grow. Beyond infrastructure replacement, sufficient enforcement resources are critical to the success of this sort of regulation, and the creation and maintenance of a robust public information tool, paired with a highly publicized public outreach campaign will take substantial resources. The state must provide more revenues to address the drinking water needs of New York State. We urge the creation of a “Clean Drinking Water Bond Act,” paid off with an assessment on companies which produce pollutants that threaten drinking water supplies.

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<sup>57</sup> Fears, D. and Dennis, B., “One city’s solution to drinking water contamination? Get rid of every lead pipe,” *Washington Post*, May 10, 2016. [https://www.washingtonpost.com/national/health-science/one-citys-solution-to-drinking-water-contamination-get-rid-of-every-lead-pipe/2016/05/10/480cd842-0814-11e6-bdcb-0133da18418d\\_story.html?utm\\_term=.9baa67f857d0](https://www.washingtonpost.com/national/health-science/one-citys-solution-to-drinking-water-contamination-get-rid-of-every-lead-pipe/2016/05/10/480cd842-0814-11e6-bdcb-0133da18418d_story.html?utm_term=.9baa67f857d0)

<sup>58</sup> Mulder, J., “Syracuse's 15,000 lead pipes pose risk to drinking water,” *Syracuse.com*, March 20, 2016. [http://www.syracuse.com/health/index.ssf/2016/03/syracuses\\_15000\\_lead\\_pipes\\_pose\\_risk\\_to\\_drinking\\_water.html](http://www.syracuse.com/health/index.ssf/2016/03/syracuses_15000_lead_pipes_pose_risk_to_drinking_water.html)

<sup>59</sup> New York State Department of Health, “Drinking Water Infrastructure Needs of New York State,” November 2008. [https://www.health.ny.gov/environmental/water/drinking/docs/infrastructure\\_needs.pdf](https://www.health.ny.gov/environmental/water/drinking/docs/infrastructure_needs.pdf).