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Buffalo Niagara at the Crossroads: How State Energy Policies can Lead Western New York To a Green, Prosperous, and Just Future

Summary

Buffalo Niagara stands at a climate crossroads. Looking down one road, we can see a chance to rebuild impoverished neighborhoods with quality jobs, green affordable housing, community-owned renewable energy, urban farms, and community gardens, building on the highly successful example of the Green Development Zone on the city's West Side. Looking down another road, we can see an inequitable region made even more unjust and vulnerable by climate change impacts such as heat waves, extreme weather events, and governments too overwhelmed with emergency response to provide quality services to their residents. Which road we travel will depend in part on the new energy policies that New York State is in the process of creating. With thoughtful legislation and regulation, we have a narrow window of opportunity to move rapidly toward clean energy and to make sure, in the transition, that our most vulnerable workers and residents gain, rather than lose, from the new economy that is rising around our eyes.

The New Energy Economy

The new energy economy is coming faster than many people believed possible. Renewable sources other than hydropower (i.e., wind, solar, biomass) supplied 7 percent of U.S electricity in the first half of 2014, up from 2 percent in 2000.[1] Prices for solar and wind have fallen dramatically. The investment firm Lazard recently reported that the cost of electricity generation using wind power fell 61 percent from 2009 to 2015, while the cost of solar power fell 82 percent.[2] The cost of a solar module has fallen 99 percent since 1976 and 80 percent since 2008.[3] Today, in 42 of the 50 largest U.S. cities, a solar system costs the average residential customer less than power from their utility.[4] Utilities in Texas, the Southwest, and the Midwest can now buy wind power for substantially cheaper prices than they pay for coal or natural gas generated power.[5]

The New Electricity Economy

"The U.S. electricity system is undergoing the biggest change in its 130 year history. The scale of electricity generation is rapidly shrinking, from coal and nuclear plants that can power a million homes to solar and wind power plants that power a few to a few hundred nearby homes. . . . Up for grabs is $364 billion in annual electricity sales."

"Beyond Utility 2.0 to Energy Democracy," Institute for Local Self-Reliance.

By 2013, there were already 119,00 people working in the solar industry, most of them in installation and other jobs located close to where the panels are being used.[6] As of 2012, more than 80,000 people were working in the wind industry, more than 20,000 in geothermal, and more than 14,000 in biomass.[7]

The energy revolution concerns not just the source of the power but also the means of its distribution. While most U.S. electricity still comes from big power plants, the market potential of distributed power (such as rooftop solar systems) is, in the words of Bloomberg Finance, "gigantic."[8] Small solar accounted for 12 percent of new power plant capacity in 2013 and 18 percent in the first half of 2014, with over 500,000 customers having installed rooftop systems.[9] SolarCity has stated that the panels it will manufacture in Buffalo will be 40% more efficient than currently available panel and yet cost less to produce.[10]

A Region in Transition

Buffalo Niagara, once a symbol of the old economy, is now at the forefront of the new economy. At the site of the old Bethlehem Steel Plant, a 1200 acre Superfund site, the 14 wind turbines of Steel Winds now provide enough power for 15,000 homes, and a four megawatt solar array, "Steel Sun" is now under construction, featuring 13,000 ground-mounted 3-by-5 foot panels.[11] Meanwhile, at the old Republic Steel site, on the newly cleaned and restored Buffalo River, the SolarCity plant is being built – expected to employ 1,500 directly and create an additional 1,500 spin-off jobs. Buffalo, one of the windiest cities in the nation and one of the sunniest cites in the Northeast, is well poised to add more wind and solar. As of October 2015, 1,421 residential and commercial solar systems had been installed or approved in Buffalo Niagara, generating 24.3 megawatts, enough to power 39,000 homes.[12]

The Problem of Inequality

The City of Buffalo is the eighth most distressed in the nation, with over 60 percent of its population living in distressed zip codes.

But as Buffalo sees signs of a resurgence in new energy, a reclaimed waterfront, a newly popular downtown, and a burgeoning medical cluster at the Buffalo Niagara Medical Campus, it continues to grapple with concentrated poverty and blight. Buffalo Niagara is also emblematic, unfortunately, of the growing split between wealthy and poor, and the way that low-income neighborhoods have missed out on economic growth and on the recovery from the Great Recession. A recent report found that Buffalo was the eighth most distressed city in the country, with 60.4 percent of its population living in distressed zip codes, and that Erie was the 20th most unequal county in the nation.[13] The metro region is racially the sixth most segregated in the region, and the gap between the poverty rate in the city of Buffalo (over 30 percent) and the rate in the region outside the city (roughly 8 percent) is one of the nation's highest.

Under our current energy policies, low-income customers are the most burdened by high gas and electric bills. Nationwide, low income households spend an average of 14 percent of their income on energy, compared to an overall household average of 3 percent.[14] New York state residents at or below 50 percent of the poverty level spend up to 41 percent of their income on energy while people who earn five times the poverty level spend only 3 percent.[15] While 2.9 million households in New York qualify for the Home Energy Assistance Program, only 1.4 million households actually received HEAP in 2013-2014, and over 268,000 households had their power shut off last year.[16]

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In Buffalo, which has the oldest housing stock in the nation, most renters and low-income homeowners live in drafty, uninsulated housing units. Because 75 percent of renters pay their own utility bills, rental property owners have little incentive to increase efficiency. Low-income homeowners often qualify for free weatherization programs, but, in many cases, they are disqualified because the other repair problems in their homes are too substantial. Renters are currently shut out from switching to solar power. This is a big group. Statewide, two in five New Yorkers are renters, including three in four Latinos and three in five blacks.[17] Meanwhile, it is those same lower income residents who live closest to sources of pollution such as power plants, factories, and highways.

Climate change is tending to exacerbate environmental injustices, as people with low incomes, who contribute the least to climate change emissions, are hit hardest by a warming planet. Under a "business as usual" scenario, Buffalo Niagara can expect to have, by 2070-2090, 48 days per year over 90 degrees and 14 days over 100 degrees.[18] Vulnerable people with low incomes, particularly seniors and people with disabilities, who lack money for air conditioning, will be most at risk of death or injury. Similarly, under a "business as usual" scenario, Buffalo Niagara will have four times as many poor air quality days by 2070-2099. People with low incomes, who already suffer most from air-quality-related diseases such as asthma and heart disease, will be hurt most by the bad air quality.

If global warming continues on its present course, Buffalo Niagara will have 48 days per year over 90 degrees and 14 days over 100 degrees.

Buffalo Niagara will also be severely affected by fate of New York City, which is the state's main economic engine. Under the state's "middle-range" projections, sea levels around New York City will rise 21 to 50 inches by 2100, and under a "high-range" projection they may rise as much as six feet.[19] Buffalo cannot thrive if New York City and its environs are slowly getting swallowed by the sea, with frequent floods that destroy infrastructure, residential areas, and commercial areas. The fiscal health of Erie County and the City of Buffalo depend on the fiscal health of the State, which in turn depends on the fiscal health of its largest economic engine, New York City.

Recall what happened to Buffalo in the wake of the attack on the Twin Towers in 2001. New York City and the State of New York were plunged into a fiscal crisis. Facing a sudden drop in revenue from New York City, combined with an onslaught of costs in repairing damage from the attacks, the State froze its level of aid to Buffalo for three years, creating a fiscal crisis that triggered sharp cuts in City spending. The City of Buffalo receives about one fourth of its revenue from the State. In difficult times, the City and County's costs increase, while their revenues from property and sales taxes stagnate or decline, and they need State and federal help all the more. If that help gets cut sharply, it will be the low-income residents of Buffalo Niagara who will feel it the most.

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Two Key Questions

There are two key questions about the transition to the new economy. First, will the change come fast enough and at a large enough scale to help avert climate disaster? Global climate emissions have continued to rise – ten percent from 1009 to 2015.[20] The global average temperature has also continued to rise, and it is now 3.6 degrees higher than the pre-industrial average. According the International Panel on Climate Change, emissions need to fall by 40 percent within 20 years and 80 percent by 2050.[21] To hit those targets, consumption of oil, coal, and natural gas would need to fall 2.2 percent each year and most nations would need to devote between 1.5 and 2 percent of their gross domestic product to the development of energy efficiency and renewable energy.[22] In addition to averting climate disaster, making this transition would dramatically improve public health and spur economic development by creating additional jobs. In the United States, investing $200 billion per year in efficiency and renewables (about 1.2 percent of GDP) would reduce emissions 40 percent in 20 years while creating 2.7 million new jobs.[23]

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Technologically and economically, the energy transition is eminently possible; but politically, it remains to be seen. At the international level, while the US-China agreements and the Paris accord are heartening, it is difficult to ensure progress in the absence of international governance. Nationally, the tragic commitment of the Republican Party to climate change denial makes national energy policy a constant battlefield. Thus, the role of states and cities has become absolutely crucial. Large, populous states like California and New York must become the vanguard of the new economy and prove to the rest of the country that it will only gain by following suit.

The second key question is, who will benefit from the transition to the new economy? A large battle is underway over who will control the new energy economy and its profits. Legislative fights are happening in over 20 states over solar power, as large for-profit utilities fight back against rules that facilitate and reward ownership of solar systems by individuals, businesses and communities.[24] The

American Legislative Exchange Council (ALEC), which receives much of its funding from the utility industry and fossil fuel investors like the Koch brothers, has made this fight a top priority.[25] At this point, utilities and large owners still dominate renewables. Utility-scale power accounts for 89 percent of wind and solar power, and only 10 percent of wind and solar is locally owned.[26] When it comes to solar, however, that dynamic is changing fast: distributed solar represented over 25 percent of new power generation in the first half of 2014, up from 1 percent in 2009, with about half of these new projects being locally owned.[27] Sensing the threat, utilities are lobbying hard against distributed power generation – demanding new laws and policies that reduce compensation for customer-owned power, limit how customer -owned projects connect to the grid, and cap the number of new customer-owned projects.[28]

Too often, energy efficiency policies and programs are designed to help utilities and higher income customers. New York State offers an excellent example of the dangers of putting for-profit utilities in charge of efficiency programs. In the past, National Fuel was funneling its rate-payer funded energy efficiency money into rebate programs aimed mainly at its upper-income customers and at marketing campaigns that amounted to little more than free advertising for the company. PUSH organized its resident members and a wide coalition of other groups to do advocacy through direct action as well as the arcane processes of the state's Public Service Commission (PSC), which regulates the utilities. In the end, the coalition won a major victory, with the PSC ordering National Fuel to move $19 million from marketing to low income weatherization programs.[29]

A Model that Works

Buffalo has a model for how to move rapidly toward a green economy while insuring that the transition benefits those who have suffered the most from environmental and economic injustice. The Green Development Zone is a 25 block area of Buffalo's West Side, centered on Massachusetts Avenue. There, PUSH Buffalo, the Massachusetts Avenue Project, the WASH Project, and other partners have turned a once blighted neighborhood into one of the most desirable neighborhoods in the city by redeveloping over 100 parcels with green affordable housing, urban farming, community gardening, job development, and cultural sharing and renewal. PUSH employs many workers directly, doing energy efficiency, stormwater management, vacant lot renewal, and related work. In addition, PUSH has created a "hiring hall" to place neighborhood residents with jobs at companies such as Savarino Companies and Solar Liberty. Meanwhile, in one year alone, the Massachusetts Avenue Project's urban farm produces 15,000 pounds of organic produce, reaches over 2,300 low income households with that produce, and employs and trains 42 disadvantaged teens.[30] The question now about the Green Development Zone is not whether it works, but how to expand and replicate it throughout the city, region, and state.

> The Green Development Zone is transforming over 100 properties in a 25 block area with green affordable housing, urban farming, and community gardening, while creating quality jobs for local residents.

A Chance to Re-Make State Energy Policy

In 2014 the State of New York launched a process called Reforming the Energy Vision (REV) to remake its electricity policies with six goals: empower customers, animate markets, increase system efficiency, increase fuel and resource diversity, improve system reliability and resilience, and reduce carbon emissions. In 2015 the New York State Energy Plan created the following targets:

> New York State has committed to reducing its greenhouse gas emissions 80 percent by 2050 and producing 50 percent of its energy from renewables by 2030.

- By 2030, a 40 percent reduction in greenhouse gas emissions from 1990 levels;
- By 2050, an 80 percent reduction in greenhouse gas emissions from 1990 levels;
- By 2030, 50 percent of electricity from renewable sources;
- By 2030, a 23 percent decrease in energy consumption by buildings (from 2012 levels).

A statewide coalition, the Energy Democracy Alliance, has been formed to ensure that the REV process is democratic both in its process and its results. On October 1, 2015, the Buffalo Common Council submitted a unanimous resolution to the NYS Public Service Commission in support of the Alliance's proposals. In a related movement, a campaign called NY Renews is advocating for state legislation to democratize the state's energy policies. NY Renews seeks legislation to make the state's climate commitments legally enforceable and ensure accountability; to create just policies that protect disadvantaged communities, and to create high quality jobs in the green energy sector.

Making Our Climate Commitment Real

The first step is to enshrine the state's climate goals in law and make them legally enforceable, lest they remain simply goals. New York should pass laws to set specific benchmarks and reporting requirements every four years until 2050 to ensure emissions reductions, increased energy efficiency, and the rapid deployment of renewables, with democratic stakeholder engagement and a private right of action. One precedent for such legislation comes from California, which passed the Clean Energy and Pollution Reduction Act of 2015, requiring, among other things, 50 percent use of renewables by 2030. This type of legislation sends an unambiguous message to markets and allows companies to transition promptly and efficiently to new ways of doing business.

Green Energy for the Communities That Need it Most

New York is planning to bundle its existing clean energy spending into a single Clean Energy Fund worth approximately $5.2 billion. The State should devote 40 percent of such funding to low and moderate income earners because they constitute 40 percent of the state's ratepayers and because they are most in need of clean energy programs. Again, California provides a precedent. Under California law, 25 percent of the funding from the state's greenhouse gas cap-and-trade fund must go to disadvantaged communities, identified by an environmental justice screening methodology.

Job Creation: Clean Energy vs. Fossil Fuels

Number of jobs created by investing $1 million dollars in clean energy versus fossil-fuels activities, by education credentials

Education Credentials	Clean Energy	Fossil Fuels
Total	16.7 jobs (100%)	5.3 jobs (100%)
High school diploma or less	8.0 jobs (47.9%)	2.2 jobs (41.5%)
Some college, no B.A.	4.8 jobs (28.7%)	1.6 jobs (30.2%)
B.A. or more	3.9 jobs (23.3%)	1.5 jobs (28.3%)

Ensuring Quality Jobs

The green economy is more labor intensive than the fossil-fuel economy. Economists have estimated that moving to cleaner energy will create 2.6 times more jobs for people with college degrees, 3 times more jobs for people with some college, and 3.6 times more jobs for people with high school degrees or less.[31] According to the NYS Department of Labor, over 23,000 people in the Western New York and Finger Lake regions are already working in green jobs.[32] Unfortunately, the fact that a job is green is no guarantee that it is a well-paying, quality job. For the clean energy revolution to fulfill its potential, the state will need to enact "high road" labor standards such as prevailing wage and living wage and ensure that no public money is used to create poverty level jobs. PUSH's experience in creating living wage jobs among its own employees and through agreements with local contractors shows that high road labor standards produce win-win situations for employers, employees, and the general public.

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Notes

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