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## Transition Support Mechanisms for Communities Facing Full or Partial Coal Power Plant Retirement in New York

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Lisa Anne Hamilton, Radina Valova, and Karl R. Rábago

March 2017

Prepared for Environmental Defense Fund by the Pace Energy and Climate Center

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**March 2017**

**Prepared by the Pace Energy and Climate Center  
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**By**

**Lisa Anne Hamilton**

**Radina Valova**

**Karl R. Rábago**

The Pace Energy and Climate Center is a project of the Elizabeth Haub School of Law at Pace University. More than a think tank, the Pace Energy and Climate Center turns ideas into action. We believe thoughtful engagement of government and key stakeholders leads to better public policy. We conduct research and analysis on legal, regulatory and policy matters because thorough, objective analyses are essential to finding solutions to today's complex energy and climate change challenges. We are lawyers, economists, scientists, and energy analysts, committed to achieving real-world progress.

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## **Executive Summary**

New York State is undergoing a rapid and unprecedented energy transformation, particularly in the electricity sector. As new resources and technologies emerge to meet the demands of 21<sup>st</sup> century life, regulators must balance the need for cost effective and equitable participation in wholesale power markets while maintaining reliability on the grid. Furthermore, it is critical that all New Yorkers participate fully in the promise of a revitalized and equitable energy future. Such a transformation requires that the needs of all communities are factored into the policies and regulations that move New York toward the bold goals set forth under its Reforming the Energy Vision (REV) initiative.

The precipitous drop in natural gas prices, the decreased costs of wind and solar energy, and the rise in the cost of coal, have contributed to the mothballing or retiring of coal-fired and nuclear energy generators across the country, including in New York. Communities that have been home to the electric generation units of the past, particularly struggling coal-fired power plants, are especially vulnerable during this transformation, because these communities often rely on the generators for tax revenues, such as through Payments in Lieu of Tax agreements. New York has the opportunity to ensure a just transition for these communities by adopting new, clean energy resources, technologies, and markets while fostering a trained and skilled workforce to support its ambitious goals. For all New Yorkers to enjoy the new energy future, leadership must address the impact of lost jobs, declining economic activity and lost tax revenue, and must support essential services in impacted communities with the same level of urgency and expansive vision needed to balance the integration of new technologies in the most cost effective manner to maintain grid reliability. At the same time, state and federal funding must be allocated to communities in transition for the remediation and redevelopment of shuttered power plant sites, and to provide the necessary support, training and tools for impacted communities to actively participate in the transition and implementation of clean energy resources.

The first section of this report examines the lessons learned from other jurisdictions in when and how to address the fiscal challenges of retiring electric generation units (EGU's). The challenges New York faces are not unlike the challenges faced by communities, legislators, and plant owners during periods of deindustrialization of the late 1960's through 1980's, described in Section One below, which additionally provides:

1. An evaluation of case studies that address the process of retirement, decommissioning, remediation and preparation for redevelopment for future use, along with the state and federal policies and funding sources that made revitalization possible.
2. An overview of case studies that illustrate local government fiscal and workforce support to communities during periods of plant transformation. These periods encompass three historical phases:
  - a. Deindustrialization of the 1960's to 1980's;
  - b. Federally Mandated Social Programs to Support Enforcement of Federal Regulations 1990's to 2000; and
  - c. Coal Plant Closures and Community Transition in the Age of Carbon Emissions Reductions: Federal and State Initiatives between 2000 to 2015; and

Section Two examines four New York coal-fired generators, some of which are currently mothballed, retired, or struggling financially. In addition to providing profiles of each generator, Section Two also describes the Payment in Lieu of Taxes (PILOT) agreements that these generators have entered into with the towns, school boards, and counties in whose jurisdictions they are located. Due to the plants' finances, several of the generators have made reduced PILOT payments in recent years, creating "budget gaps" for some of the communities.

Finally, Section Three describes state and federal funding and support mechanisms that may be available to the New York communities described in Section Two. Because each community faces unique challenges and opportunities, this report does not attempt to provide specific recommendations for any of the communities. Rather, Section Three lists a number of support mechanisms that each community could consider in developing its own transition plan.

New York State leadership can capitalize on the legislative legacy of prior eras and develop comprehensive approaches to reinvest in communities with obsolete industrial facilities that were once the primary source of jobs and economic activity, and revenue to local budgets.

### **Key Findings and Recommendations:**

New York has the opportunity to ease the impact of transition on communities and families through direct fiscal support and by allowing the goals of the REV process to support a just transition. New York is well positioned to adopt policies and fund workforce development



and training programs, social services, and economic development initiatives to ensure that there is skilled labor available within these communities to meet the opportunities created through its investments in clean energy generation and infrastructure. These initiatives will most likely achieve the greatest success when supported and informed by labor unions, school districts, community advocates and local economic development officers currently involved in addressing the direct and indirect impacts of changing economic activity.

The recommendations that New York State politicians could consider include:

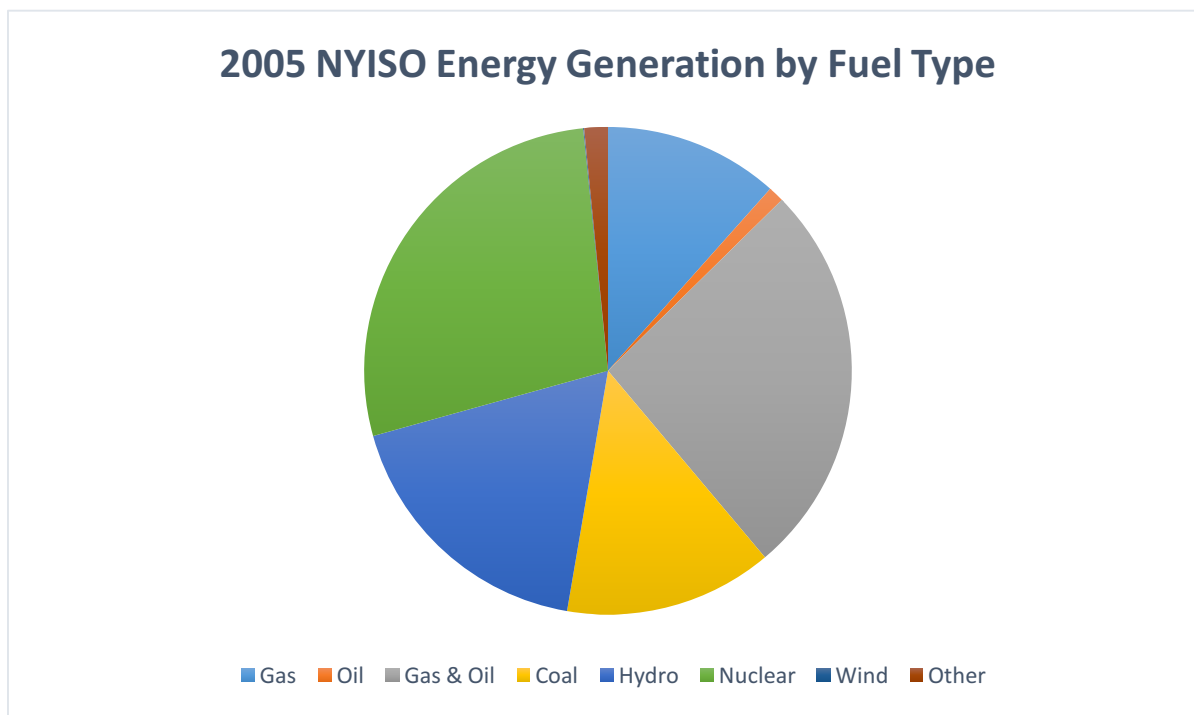
- Adopting mitigation strategies for fiscal support to local governments to bridge the budget impacts of lost PILOT;
- Empowering local communities through matching grants. This would ensure that communities have the resources to participate in federal planning grants, which often require matching funds for the purpose of convening community round tables and retaining technical support to evaluate the next steps in economic development;
- Aligning workforce training initiatives with approaches to meeting the goals of continued emissions reductions through the Regional Greenhouse Gas Initiative (RGGI) baseline scenario and New York's Clean Energy Standard (CES), including efforts to lower transportation, building, industrial and electric emissions; and
- Tapping into brownfields programs to assist with remediating and redeveloping the sites of generators that shut down.

New York is as equally well positioned to serve as a national model for how to best integrate renewables into the energy market, as it is to serve as a model for comprehensively supporting and reinvigorating communities that are home to struggling electric generation units.

## 1. Introduction

Over the last decade, a number of market, technological and regulatory developments have contributed to a national shift away from aging EGUs and towards greater reliance on more diverse and cost effective resources to ensure grid reliability. In 2005, electric generation from coal-fired units in New York produced approximately 21,184 gigawatt-hours (GWh), or 14 percent of the total electricity generated in New York. By 2012, however, production of electricity from New York coal-fired generators had decreased to approximately 4,281 GWh for the year, or 3 percent of the total electricity generated in New York that year. This represents a decrease of almost 80 percent from 2005 levels.<sup>1</sup> Figures 1 and 2 below further demonstrate the shift away from coal.

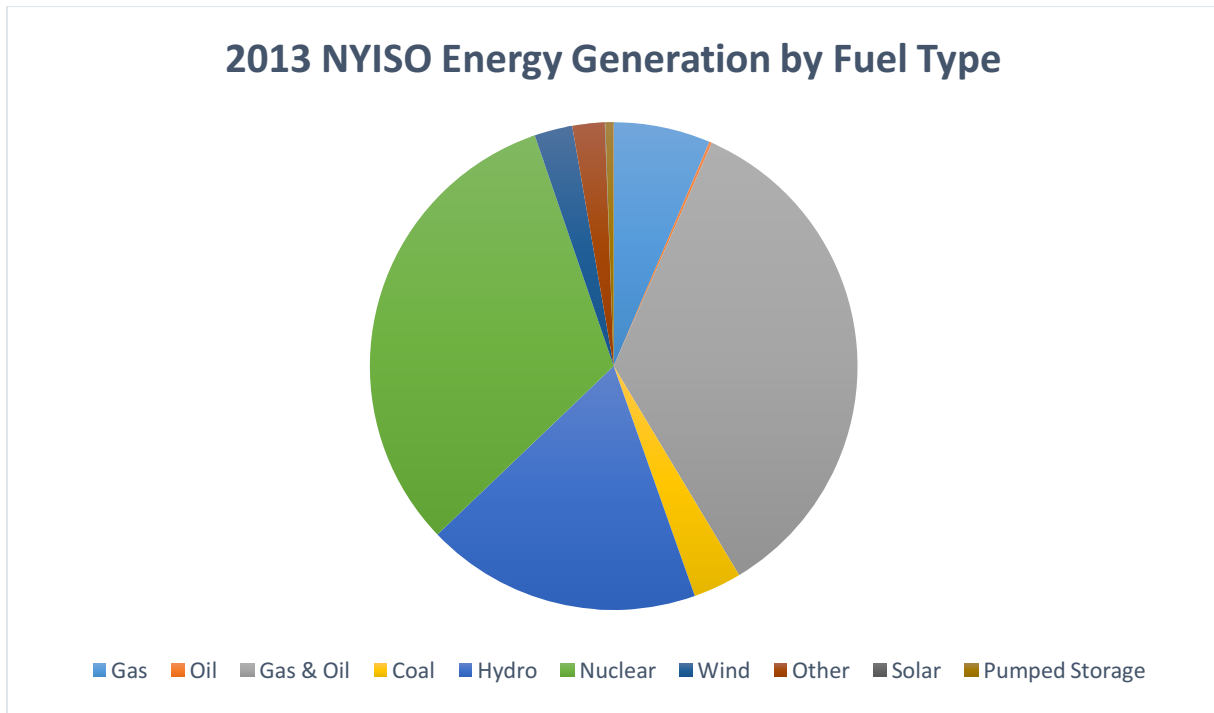
Figure 1: 2005 NYISO<sup>2</sup> Energy Generation by Fuel Type.



<sup>1</sup> State of West Virginia, et al v. United State Environmental Protection Agency, et al, Declaration of Audrey Zibelman, Chair New York State Public Service Commission, Case No. 15-1363 (2015).

<sup>2</sup> New York Independent System Operator. "Power Trends 2015 Rightsizing the Grid," 2015 available at [http://www.nyiso.com/public/webdocs/media\\_room/publications\\_presentations/Power\\_Trends/Power\\_Trends/ptrends2015\\_FINAL.pdf](http://www.nyiso.com/public/webdocs/media_room/publications_presentations/Power_Trends/Power_Trends/ptrends2015_FINAL.pdf).

Figure 2: 2013 NYISO Energy Generation by Fuel Type.<sup>3</sup>



The shift away from coal-fired generation is attributed to a number of factors. Shale gas production increased due to advances in hydraulic fracturing (fracking) that allowed for increased domestic natural gas production at much lower cost and higher volumes. Historically the Henry Hub in Louisiana has been the most important pricing location for natural gas in the United States. However, as new pipeline projects have come online, the Dominion South Hub in Southwest Pennsylvania has gained importance in gauging pricing due to the discovery and production of increasing amounts of natural gas from the Marcellus Shale in the Eastern United States.<sup>4</sup> The collapse of natural gas prices in late 2008 to early 2009 due to the large and growing

<sup>3</sup> The data-supported graphics are based on the peak load, energy requirements, existing resource capacity and planned changes, in addition to the existing and proposed transmission. The NYISO forecasts within the New York Control Area (NYCA), and the New York State Reliability Council has the responsibility of setting the installed minimum capacity requirements consistent with NPCC reliability criterion. NYISO assigns a portion of the installed capacity requirement to each Load Serving Entity (LSE) located within the NYCA.

<sup>4</sup> Natural gas spot prices around the United States are often compared to prices at the Henry Hub in Louisiana. At trading points in and around the Marcellus and Utica shale plays in Pennsylvania, West Virginia, and Ohio, natural gas prices consistently trade below the Henry Hub national benchmark price. However, the difference between these pricing points and the Henry Hub has narrowed in recent months as new pipeline projects have come online. United States Energy Information Administration. "Spread Between Henry Hub, Marcellus Natural Gas Prices Narrows As Pipeline Capacity Grows," January 27, 2016 available at <http://www.eia.gov/todayinenergy/detail.cfm?id=24712>.

supply of shale gas, and the subsequent decline in the cost of generating power at natural gas-fired power plants led to steep declines in the amount of power generated at existing coal-fired electric generating units. By 2015, natural gas (either gas-only or dual-fuel), represented 56% of New York’s generating capacity, with more than 70 percent of proposed generating capacity for natural gas or dual-fuel projects.<sup>5</sup>

Due to the significant declines in fuel prices, gas-fired generators were dispatched ahead of coal-fired power plants in wholesale power markets, particularly in regions where coal-fired units primarily burned higher-cost Appalachian coal. Renewable resources, including wind, solar, hydropower and geothermal, also have lower operating costs relative to fossil fuels. These resources are dispatched as the most cost effective sources for generation whenever they are available. Current and projected power market costs indicate that dispatch will continue to favor hydropower, wind and natural gas combined-cycle combustion turbines over coal units, especially those coal units owned by independent power producers.

Nationwide, for utilities operating in deregulated or restructured markets, the increased costs of fuel, operations and maintenance of coal-fired generation exceeds the price of power currently on the wholesale market and into the foreseeable future. Owners of EGUs weigh the cost and profitability of three potential scenarios: (1) install pollution control upgrades, (2) conduct conversions to natural gas or biomass, or (3) retire the plant.

Older coal-fired electric generating units that have been operating for 50 to 60 years and are at, or near, the end of their useful life, experiencing significant operations and maintenance costs. Traditionally, it is common to retire a plant after 35 to 40 years of service where it is assumed that older plants with higher heat rates and lower efficiencies would be retired to make room for newer, larger, and more efficient units.<sup>6</sup> Alternatively, where new construction of plants is delayed, operators can pursue a strategy of life extension.

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<sup>5</sup> New York Independent System Operator. “Power Trends 2015 Rightsizing the Grid,” 2015 available at [http://www.nyiso.com/public/webdocs/media\\_room/publications\\_presentations/Power\\_Trends/Power\\_Trends/ptrends2015\\_FINAL.pdf](http://www.nyiso.com/public/webdocs/media_room/publications_presentations/Power_Trends/Power_Trends/ptrends2015_FINAL.pdf), at p. 6.

<sup>6</sup> See Babcock & Wilcox. “Steam: Its Generation and Use,” *Babcock & Wilcox; 40th edition* (1992). Print.

While this strategy delays plant retirement by replacing component parts, significant capital expenditures and other maintenance costs are required.<sup>7</sup> An aging coal fleet can be expected to have higher operating and maintenance costs, continuing annual expenditures, and degrading operating performance. The forced outage rate steadily increases during this phase unless major overhauls or component replacements are instituted. As a result, the annual per-MWH costs of generating power at coal-fired power plants increase where the plants' fixed and variable fuel and non-fuel operations and maintenance costs increase.<sup>8</sup> As a result, owners and operators of aging coal-fired generation experience declining gross margins (total revenue less variable costs) and can no longer cover the full cost of service for their facilities. Since 2008, many coal-fired power plants operated at a loss for several years before announcing plans to retire.

Owners and operators of coal-fired electric generation units with more favorable gross margins have also been faced with the decision to switch fuels and convert facilities to natural gas or biomass, or to invest millions in pollution-control technologies to comply with EPA regulations.<sup>9</sup> In addition to managing the requirements of EPA regulations, owners and operators also weigh the regulatory uncertainty of state or regional carbon dioxide (CO<sub>2</sub>) regulations. For many independent power producers, aging coal-fired facilities are too big, too old and too carbon-intensive to be considered for carbon capture retrofits that would ensure a return on retrofit investments in wholesale markets that favor natural gas.

After the financial crisis of 2008-2009, a slowdown in economic activity resulted in relatively flat electricity demand due to the financial conditions caused by the recession with further flattening in demand caused by the increased implementation of energy efficiency in buildings and appliances. In the NYISO region, summer peak demand increased only 0.75% per year for the years 2003-2012. These demand projections were substantially higher than the peak loads forecasted for the New York Control Area (NYCA) between the years 2006 through 2016, which expected a compound growth rate of 0.9% and a forecast net energy for the same ten-year period of 1.1%.<sup>10</sup> Increased production costs, particularly for Central Appalachian coal, exceeded the associated operating costs for alternative resources and, in turn, rendered U.S. coal unprofitable and unable to compete against natural gas and renewables to sustain coal's previous market share in the wholesale power markets in New York and throughout the

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<sup>7</sup> *Id.*

<sup>8</sup> WVA v. USEPA, Declaration of Tom Sanzillo, Director of Finance, Institute for Energy Economics and Financial Analysis Case No. 15-1363 at k, December 2015.

<sup>9</sup> Cusik, Daniel. "U.S. Coal-Fired Power Plants: Update or Close?" Climate Wire, May 20, 2013, available at <http://www.scientificamerican.com/article/us-coal-fired-power-plants-update-close/>.

<sup>10</sup> See NYISO Goldbook.

country.<sup>11</sup> This means that while total electricity demand remained relatively flat, the share of coal has been reduced by competition from both natural gas-fired and renewable generation.

In addition to the market forces that encourage fuel-switching from coal to less carbon-intensive generation, a number of regulatory initiatives encourage fuel switching to resources that are less carbon intensive, as further described in Section 1.1.

### **1.1 Transformation of Regulatory Initiatives to Reduce Carbon Emissions**

The Regional Greenhouse Gas Initiative (RGGI), working in concert with the changing markets for fossil fuels, state renewable portfolio standards (RPS) and energy efficiency resource standards (EERS), and other state and federal environmental policies, aims to lower total energy-related CO<sub>2</sub> emissions from the nine participating RGGI states by 40% below 1990 levels by 2030 and by 80% by 2050. As of May 2016, RGGI states' emissions are projected to decrease by 23% below 1990 levels by 2030 without any new carbon reduction policy initiatives.<sup>12</sup>

Since 2008, New York has participated in RGGI with Connecticut, Delaware, Maine, Maryland, Massachusetts, Rhode Island and Vermont. RGGI is the first mandatory market-based program in the United States to limit greenhouse gas emissions from the electric power sector.<sup>13</sup> RGGI auctions emission allowance certificates, representing the states' allowable CO<sub>2</sub> emissions to power generators. For each ton of CO<sub>2</sub> emitted, fossil fuel generators must purchase an allowance. The revenue from these auctions is returned to states and is typically spent on renewable energy and efficiency programs.

The New York Public Service Commission (the Commission) has built upon RGGI's greenhouse gas emission reduction goals with additional programs. For example, in 2007, the Commission initiated the Energy Efficiency Portfolio Standard (EEPS), the goal of which was to balance cost impacts, resource diversity and environmental effects by decreasing New York State's energy use through increased conservation and efficiency.<sup>14</sup>

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<sup>11</sup> WVA v. USEPA, Declaration of Tom Sanzillo, Director of Finance, Institute for Energy Economics and Financial Analysis Case No. 15-1363 December 2015.

<sup>12</sup> Stanton, Elizabeth, *et al.* "The RGGI Opportunity 2.0," Synapse Energy Economics, Inc., March 4, 2016, available at [http://www.synapse-energy.com/sites/default/files/RGGI\\_Opportunity\\_2.0.pdf](http://www.synapse-energy.com/sites/default/files/RGGI_Opportunity_2.0.pdf), at p. 3.

<sup>13</sup> RGGI became effective in New York State in 2008. See 6 NYCRR Part 242.

<sup>14</sup> New York Public Service Commission. "Draft Energy Efficiency Environmental Impact Statement Issued," November 7, 2017, available at

The Commission is currently contemplating regulatory, tariff, market design and incentive structures to foster New York’s RPS goals. The state-level renewable portfolio standards encourage the use of renewable sources of electricity, state efforts to regulate carbon emissions from the energy sector, and efforts to regulate conventional pollution, including particulate matter, sulfur dioxide, nitrogen oxide and toxic metal pollution released from coal-fired power plants and coal mines. In 2014, the Commission commenced efforts to implement Governor Andrew Cuomo’s REV initiative, which will ultimately supplant the prior EEPS and RPS programs, further reduce carbon emissions through improved grid and load management, and optimize the use of more efficient generation technologies, including but not limited to customer-deployed generation resources.<sup>15</sup>

The New York Public Service Commission has issued an Order on New York’s Clean Energy Standard (CES),<sup>16</sup> which is designed to meet Governor Cuomo’s directive under the State Energy Plan of sourcing 50 percent of New York’s energy from renewables by 2030,<sup>17</sup> including distributed energy resources (DERs) and large-scale renewables.

At the federal level, the U.S. Environmental Protection Agency (EPA) released the Clean Power Plan (CPP) to limit CO<sub>2</sub> emissions from electric generators nationwide. However, the combined CPP target for Northeast states for 2030 is less stringent and allows higher levels of emissions than the RGGI cap for 2020: 80 million short tons compared to 78 million short tons of CO<sub>2</sub> (which, in turn, is less stringent than New York’s State Energy Plan and CES goals). With no further electric sector emission reductions between 2020 and 2030, the Northeast states’ RGGI agreement already achieves CPP compliance for the nine participating states.<sup>18</sup>

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[https://www3.dps.ny.gov/pscweb/WebFileRoom.nsf/Web/EA5F9D9189E9D8B78525738C006ABC0C/\\$File/pr07099.pdf?OpenElement](https://www3.dps.ny.gov/pscweb/WebFileRoom.nsf/Web/EA5F9D9189E9D8B78525738C006ABC0C/$File/pr07099.pdf?OpenElement).

<sup>15</sup> WVA v. USEPA, Declaration of Tom Sanzillo, Director of Finance, Institute for Energy Economics and Financial Analysis Case No. 15-1363 December 2015.

<sup>16</sup> Case 15-E-0302, Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard. Order Adopting a Clean Energy Standard (August 1, 2016).

<sup>17</sup> New York State Department of Public Service. Reforming the Energy Vision, available at <http://www3.dps.ny.gov/W/PSCWeb.nsf/All/CC4F2EFA3A23551585257DEA007DCFE2?OpenDocument>.

<sup>18</sup> Stanton, Elizabeth, *et al.* “The RGGI Opportunity,” Synapse Energy Economics, Inc., February 5, 2016, available at <http://www.synapse-energy.com/sites/default/files/The-RGGI-Opportunity.pdf>. On February 9, 2016, the United States Supreme Court issued a stay on the Clean Power Plan. One week later, on February 16, seven of the RGGI

As New York State regulators and stakeholders contemplate the most cost effective strategies to integrate renewable resources into the grid, it is equally critical that regulators also contemplate policy approaches to ensure that all New Yorkers can participate fully in the promise of a revitalized energy future. Legislative approaches from previous eras of deindustrialization and transition provide a roadmap for effective fiscal and workforce support strategies to New York communities.

## **1.2 Deindustrialization of the 1960's to 1980's**

In the late 1970's and 1980's, regional shifts in productivity centers away from the northeastern regions of the country to either sunbelt states or overseas contributed to economic decline, stagnant productivity, and increased vulnerabilities to recession, as well as social vulnerabilities caused by the abrupt closing and relocation of one or more major industrial facilities. In cities like Youngstown, Ohio; Detroit, Michigan; Camden, New Jersey; Pittsburgh, Pennsylvania; and Akron, Ohio, stakeholders at the local, state, and federal levels, in cooperation with labor unions, responded to the abrupt departure of steel mills, tire factories and other large scale industries. Between 1979 and 1984, federal and state legislatures attempted a number of approaches to alleviate the economic and social impacts of the elimination of more than 11 million jobs due to plant closings and relocations.

The case study below highlights the drivers behind the closures, the legislative and policy approaches to address those closures and the challenges encountered when implementing solutions.

### **1.2.1 Case Study: Youngstown Steel Mill Closings, Ohio (1977-1982)**

On September 19, 1977, known as Black Monday to the community of Youngstown, Ohio, 5,000 workers showed up for work at the Campbell Works and were told that the mill was shutting down. Located between Cleveland and Pittsburgh, the Youngstown Warren area contained more than 500,000 residents, with nearly half of the workforce employed in

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state governors (all but Maine and Maryland), together with 10 other governors, signed a Governor's Accord marking their intention to continue implementing a clean energy future, available at <http://static1.squarespace.com/static/56704ad6bfe873c2cc9eff73/t/56c3b30c62cd942b3f8c1dc5/1455665943323/accord>.



manufacturing and steel.<sup>19</sup> Each fall between 1977 and 1979, a major steel mill in the Mahoning Valley announced its intention to close. Three mills, including the Lykes Corporation's (formerly Youngstown Sheet and Tube) Campbell Works, the Brier Hill Works, and the Youngstown Works laid off 10,000 workers. Analysts from the firm of Booz, Allen & Hamilton studied the facilities and determined that the steel mills of the Mahoning Valley were old, technologically obsolete and needed modernization. Because the facilities were never modernized, steel making required more time and more labor, rendering production at these facilities to be less profitable than newer facilities. By 1982, other mills in the Youngstown district shuttered, which resulted in the loss of more than 40,000 jobs, creating an unemployment rate of 24% in the region.<sup>20</sup>

In the years during and following the closures, coalitions consisting of labor unions, church leaders, lawyers and families impacted by the sudden terminations adopted a number of tactics to attract national attention to their struggles and salvage the economic viability of the region. Coalition members joined together to develop a campaign whereby members signed petitions to call upon the President of the United States to intervene and attempted a number of employee ownership schemes whereby former workers would buy a plant back, modernize it and reopen it.<sup>21</sup>

Initial federal intervention efforts included an allocation of \$100 million in loan guarantees for economic development in the Youngstown area to be administered by the Economic Development Administration (EDA) of the Department of Commerce and outright grants under the Urban Development Action Grant (UDAG) program administered by the Department of Housing and Urban Development (HUD).<sup>22</sup> Although some HUD funding went toward supporting feasibility studies of community-initiated attempts to pursue employee ownership of the plant, the effort did not have the support of the EDA, and the efforts were ultimately abandoned.

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<sup>19</sup> Lynd, Staughton. "The Fight Against Shutdowns: Youngstown's Steel Mill Closings." *San Pedro: Singlejack Books* (1982). Print.

<sup>20</sup> UrbanOhio. "Youngstown – A Tale of two Steel mills," available at <http://www.urbanohio.com/forum2/index.php?topic=27212.0>.

<sup>21</sup> Lynd, Staughton. "The Fight against Shutdowns: Youngstown's Steel Mill Closings." *San Pedro: Singlejack Books* (1982). 73. Print.

<sup>22</sup> *Id.*

When workers abandoned employee ownership strategies, lawyers were engaged to pursue legal remedies. Workers at U.S. Steel's Youngstown plant believed that the company had broken a verbal contract with workers to keep mills open as long as the operations were profitable, and under the National Labor Relations Act, local unions or individual employees could sue a company for violating a contract.<sup>23</sup> The legal action was also an attempt to deter further closures in instances where company leadership would promise to keep a facility open and then ultimately announce that it would close.<sup>24</sup> Although the legal arguments had no precedent, plaintiffs put forth the argument that there was a community property right in the continued operations of manufacturing institutions of the region. Ultimately the court could not determine a basis for finding a property right and instead referenced legislative actions that were at the time pending on Capitol Hill to provide remedies for the loss of the economic lifeblood of the community.<sup>25</sup>

What followed in the wake of the community organizing and failed attempts to form employee coalitions to assume ownership of the plant were a number of federal and state legislative initiatives to support communities and their workers in the face of sudden plant closures. Proponents of plant closing legislation asserted that plant closings imposed severe costs on employees, communities, and the national economy. Some of these costs included the impact of prolonged unemployment and the resulting drain on national income; reductions in local tax revenues; increased physical and mental illness; increased demand for local social services; reductions in long term local business investment; underutilization of existing buildings and public infrastructure; and disruption of community social cohesion and family stability.<sup>26</sup>

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<sup>23</sup> See Lynd, Staughton. "The Fight against Shutdowns: Youngstown's Steel Mill Closings." *San Pedro: Singlejack Books*, (1982). 141. Print. Local 1330, United Steelworkers of America v. United States Steel Corp., 631 F.2d 1264 (6<sup>th</sup> Cir. 1980). Youngstown steel plant closure plaintiffs unsuccessfully sued for contract, estoppel, antitrust, refusal to deal and a claim that the local community because of its interests had a right of action to prevent the move.

<sup>24</sup> Lynd, Staughton. "The Fight against Shutdowns: Youngstown's Steel Mill Closings." *San Pedro: Singlejack Books* (1982). 162. Print. (Discussion of the closure of U.S. Steel's Ohio Works company.)

<sup>25</sup> *Id.* at 176.

<sup>26</sup> McKenzie, Richard B. "Fugitive Industry: The Economics and Politics of Deindustrialization." *Pacific Institute for Public Policy Research* (1984). 3. Print. Researchers found that a 1 percent increase in the national unemployment rate is associated with an increased number of deaths, suicides, homicides, increased admissions to mental hospitals, and increased admissions to state prisons. State Plant Closing Legislation: A Modern Justification

At first, legislative initiatives focused on taxing the migration of capital to make closings unattractive and encourage the retention of operating facilities to promote economic efficiency. Proponents of retention legislation argued that retention initiatives would provide disincentives to firms to shut down facilities when the overall benefits of such closings to society exceeded the overall costs to the operators. A second related purpose of the proposed laws was to shift some of the burdens associated with closings onto firms and to ease the impact on affected workers and their communities.

Both state and federal legislative initiatives developed during this period addressed a number of workforce and community needs deemed critical to help communities transition, including:<sup>27</sup>

- Notice Requirements: Several states developed legislation requiring facility owners to provide notice to workers, often varying between 60 days to years, of the intent to shutter facilities. New York’s notice requirements are found in the Worker Adjustment and Retraining Notification (WARN) Act and are generally more stringent than federal law.<sup>28</sup> Opponents expressed concern that too much notice would lead to an inevitable decline in productivity as key employees leave or are absent to look for other work. Other concerns include that advance notice would create increased conflict between the company and employees who believe they are being treated unfairly, with impacts on productivity. Opponents also contend that notice of a plant shutdown can have a deleterious effect on customer orders and on the price of a company’s stock.
- Governmental Oversight: Several legislative measures include designating a governmental agency with the task of reviewing the decision to shut down and relocate a facility to determine whether or not it is economically justified. If the agency were to find that the closing was not justified it could attempt to reverse the decision by moral suasion or could be empowered to impose penalties on the employer. One such penalty has been

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for the Use of the Dormant Commerce Clause as a Bulwark of National Free Trade at 75 VA. L. REV. 845 at 857 (1989).

<sup>27</sup> McKenzie, Richard B. “Fugitive Industry: The Economics and Politics of Deindustrialization.” *Pacific Institute for Public Policy Research* (1984) at Appendix A. Print.

<sup>28</sup> New York State Worker Adjustment and Retraining Notification (WARN) Act, <https://labor.ny.gov/formsdocs/factsheets/PDFs/p483.pdf>.

the denial of any tax benefits accruing from the closing or a prohibition against deducting business expenses associated with a relocation. Conversely, if the agency were to determine that the closing was economically justified, it would be empowered to grant governmental assistance in attempt to rectify the situation. This assistance could include loans, loan guarantees, interest subsidies, assumption of debts by the government, technical assistance to modify products or methods of production, and targeted procurement.<sup>29</sup>

- Financial Aid to Employees: Many of the legislative proposals contained a mandated severance pay provision based on a formula that takes into account workers' levels of pay and years of service.<sup>30</sup>
- Transfer rights: To the extent that the company involved in the plant closure opens a new facility elsewhere, many proposals include mandatory right to transfer, requiring that discharged workers would be entitled to transfer into open positions in the new facilities on a preferential basis.
- Payments to Local Communities: Under certain legislative schemes, an employer would be required to pay to the local governments some percentage of their lost tax payment over a period of time or make payments to the federal government if the jobs were moved outside of the United States. Other proposals mandated federal assistance to local governments when a plant shuts down or relocates. This assistance would include direct grants to local governments for social services, creation of public work projects, and assistance to other businesses in the community to allow them to expand.<sup>31</sup>
- Assistance for employee buyouts: Federal assistance to enable cooperative associations of employees to purchase and operate facilities which are to be closed has also been proposed. In addition to loans and loan guarantees, this aid would include technical assistance in identifying new markets or new production and marketing techniques.

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<sup>29</sup> See National Employment Priorities Act of 1979, (H.R. 3187) (S.1608) 96th Congress 1979-1980 (two year notice reduced to reasonable promptness); S. 1608 Congress 1<sup>st</sup> Session 4(b)(3) (1979) (two years and six months if 500 employees involved, 18 months if 100 employees involved, and six months if less than 100 employees involved).

<sup>30</sup> H.R. 2847 §§ 2705-2707.

<sup>31</sup> National Employment Priorities Act of 1979, (H.R. 3187) (S.1608 § 23) 96th Congress 1979-1980.

In a number of instances, failed attempts to enact federal programs like the Ford-Riegle National Employment Priorities Act of 1979 fell short of offering protections to communities of workers and their families. The bill, originally introduced by Representative William Ford (R-MICH) in 1977, required pre-notification of plant closure and job loss; severance pay; and protection of worker and family benefits for a period of time after the plant has closed and before workers have found other jobs. While the bill was never enacted into law, research to date indicates that these provisions were comprehensive in addressing the variety of economic, fiscal, and social challenges communities faced and may be instructive for New York State.

### **1.3 Federal Program Support and Regulations 1990's to 2000**

The second phase of case studies includes a review of federal initiatives intended to support communities that were projected to face fiscal and regional economic downturns as a result of the enforcement of federal regulations.

#### **1.3.1 Case Study: RE Burger Plant & Federal Response to Enforcement of 1990 Amendments to Clean Air Act**

In 1995, enforcement of the 1990 amendments to the Clean Air Act (CAA) led to partial retirements of several units of coal-fired plants and the release of 95 workers at First Energy's RE Burger Plant in Ohio. The Acid Rain program, EPA's initiative to reduce the overall atmospheric levels of sulfur dioxide and nitrogen oxides through an emissions trading scheme, increased retirements substantially from 1988 to 1991. Utilities removed very old units with a mean age of 31 years that they no longer expected to use from available status, thereby avoiding maintenance costs necessary to keep them on standby.<sup>32</sup> For First Energy workers at the Burger plant, the decision to close 3 units on the older side of the plant was announced the same day as the workers' termination.

Union representatives assisted workers from the Burger plant by providing support and instructions about federal job training programs that offered income support while the workers were enrolled. As part of the 1990 amendments to the CAA, Congress created the Clean Air Employment Transition Assistance program as part of the Job Training Partnership Title III

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<sup>32</sup> United States Department of the Interior, Office of Surface Mining Reclamation and Enforcement. "Impact of Acid Rain Controls on Surface Mining Reclamation and Enforcement: Programs and Workload," Washington, D.C.: Office of Surface Mining Reclamation and Enforcement 1993.

(JTPA) to cover workers laid off as a consequence of CAA compliance. Benefits included a job search relocation allowance of up to \$4,800 and need-related payments to help workers complete retraining or education programs.<sup>33</sup> The Workforce Investment Act (WIA) was established in 1998 to consolidate the administration and delivery of various job training and employment services, including JTPA and the Trade Adjustment Assistance Act (TAA), designed to assist workers negatively impacted by U.S. trade policies, and other transition workers programs. Critics of retraining programs, particularly classroom training programs, argue that skill training should be offered sparingly for well specified needs and only where adequate local training resources are present. These recommendations are contrary to outcomes that indicate that displaced workers who received adequate income support while being retrained were more likely to find employment with higher wages.<sup>34</sup>

Programs like the WIA and the TAA established one-stop career centers throughout the country where all dislocated workers could access income and benefit replacement, career counselling, job placement and a variety of other services. These centers also provided some training, GED classes, literacy and occupational skills. The American Recovery and Reinvestment Act of 2009 significantly increased support for WIA programs and one-stop career centers with particular emphasis on those services targeted toward dislocated workers. In September 2014, Representatives David McKinley (R-W.VA) and Peter Welch (D-VT) introduced the Healthy Employee Loss Prevention Act (HELP Act) to assist coal field workers with finding jobs or retraining programs.<sup>35</sup>

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<sup>33</sup> Whittaker Julie M. and Blake Alan Naughton. "Federal Programs Available to Unemployed Workers," Cornell University ILR School, November 14, 2007, available at [http://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=1475&context=key\\_workplace](http://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=1475&context=key_workplace), at 4.

<sup>34</sup> United States Department of the Interior, Office of Surface Mining Reclamation and Enforcement. "Impact of Acid Rain Controls on Surface Mining Reclamation and Enforcement: Programs and Workload," Washington, D.C.: Office of Surface Mining Reclamation and Enforcement 1993.

<sup>35</sup> See Valentine, Katie. "Bipartisan Bill Would Help Out of Work Coal Miners Find New Jobs," ThinkProgress, September 29, 2014 available at <http://thinkprogress.org/climate/2014/09/29/3573272/coal-miner-job-assistance-bill/>.

## **1.4 Community Transition in the Age of Carbon Emissions Reductions 2000 to 2015**

Owners and operators of electric generating units and transmission utilities began balancing the realities of providing safe, reliable power at competitive prices to meet the near-term demands of customers while still earning a return on investment to satisfy shareholders. Once continued operations were no longer an economically viable option, plant owners, local leadership and community-led coalitions worked together to mitigate impacts on ratepayers, workers, and local governments.

### **1.4.1 Case Study: Minnesota Greenhouse Gas Emission Initiative and Xcel Energy**

In a partnership effort between the Minnesota State legislature, the Minnesota Department of Commerce, Minnesota's Public Utilities Commission, and Minnesota electricity producers, including Xcel Energy, the state pursued several strategies to significantly reduce its greenhouse gas (GHG) emissions. Beginning in 2001, the Minnesota legislature enacted an emission reduction statute that allowed special recovery rate consideration for air pollution control projects, with the goal to reduce emissions from Minnesota's aging coal-fired utility boilers.<sup>36</sup> As a result, beginning in 2007 and finishing in 2009, Xcel Energy, the state's large electric utility, completed the "Metro Emissions Reduction Project." The project repowered a 520 MW coal-fired power plant, which lowered its heat rate by 5%, and replaced 642 MW of coal-fired power with 956 MW of natural gas combined cycle generation. Between 2005 and 2012, GHG emissions from the electric utility sector, the largest single sector source of GHG emissions in Minnesota, declined 7%.<sup>37</sup>

In 2007, the Minnesota legislature unanimously adopted a wide-ranging state effort to address GHG emissions in Minnesota, known as the Next Generation Energy Act (NGEA).<sup>38</sup> The NGEA established state-level GHG emission reduction targets of 15% from 2005 levels by 2015, 30% from 2005 levels by 2025, and 80% from 2005 levels by 2050, as well as reporting

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<sup>36</sup> Minn. Stat. §216B.1692.

<sup>37</sup> Minnesota Pollution Control Agency. "Greenhouse Gas Emissions in Minnesota," available at <https://www.pca.state.mn.us/air/greenhouse-gas-emissions-minnesota-0>.

<sup>38</sup> Minn. Stat. §§ 216H.01-13.

requirements for GHG emissions, a comprehensive planning process, and limitations on coal-fired generation.<sup>39</sup>

The Minnesota legislature adopted a state Renewable Energy Standard (RES)<sup>40</sup> in 2007, which phases in from 2010 to 2025 and creates renewable energy requirements for all utilities operating in the state. It is expected to result in a weighted 27% of all retail electric sales in Minnesota coming from renewable energy sources. Minnesota now has about 2,800 MW of renewable energy installed, and based on Minnesota utilities' long range resource plans, the state is on track to meet the RES requirement by 2025. In addition to the overall RES, in 2013, the Minnesota legislature adopted a Solar Energy Standard for the state's investor-owned utilities, requiring that by the end of 2020, at least 1.5% of total retail sales are generated by solar energy.<sup>41</sup>

In October 2015, Minneapolis based Xcel Energy announced an accelerated transition from coal energy to renewables, resulting in a 60 percent reduction in carbon emissions by 2030, and that it would cease coal-fired generation at the Sherburne County Generating Station (Sherco) Units 2 and 1 in 2023 and 2026, respectively. The company also announced that it would move up in time substantial new renewable generation to 1,200 MW by 2020.<sup>42</sup>

In 2015 Minnesota passed the State Dislocated Worker Program, which provides grants to workforce service areas or other eligible organizations and makes allocations to the state's workforce development.<sup>43</sup> Funds may be used for any combination of development readjustment plans for individuals, job or career counseling, testing, orientation, and assessment of skills and aptitudes, among other job placement assistance. The statute also provides for support services, including assistance to help with relocation, out-of-area job search, family care, child care, commuting, emergency housing and rental assistance, and emergency health and financial

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<sup>39</sup> Minnesota Pollution Control Agency, "What is the MPCA Doing?", available at <https://www.pca.state.mn.us/air/what-mPCA-doing>.

<sup>40</sup> Minn. Stat. § 216B.1691.

<sup>41</sup> Minn. Stat. § 216B. 1691, subd. 2f.

<sup>42</sup> Fresh Energy. "Xcel Energy Proposes Nation-Leading Transition From Coal Energy to Renewables," Fresh Energy, October 02, 2015 available at <http://fresh-energy.org/2015/10/xcel-energy-proposes-nation-leading-transition-from-coal-energy-to-renewables/>.

<sup>43</sup> Minn. Stat. § 116L.17. State Dislocated Worker Program (2015).



assistance, which enables a person to participate in employment and training programs with the goal of reemployment. The statute also provides a combination of short-term and long-term training for dislocated workers to either enhance their current skills or train in a new occupation or industry.<sup>44</sup> The programs also provide allocations for multiple stages of workforce development, including paid internship opportunities under the workforce development fund, and a grant to the Minnesota High Tech Association to support science, technology, engineering and math (STEM) paid internships, in addition to career and higher education advising.<sup>45</sup>

#### **1.4.2 Case Study: Fisk and Crawford Plants (Chicago, Illinois)**

The retirements of the Fisk and Crawford plants in Chicago provide examples of recently retired facilities that have compelled collaboration by local entities to facilitate a just transition from a polluting coal-fired power plant to beneficial reuse. They accomplished the transition through a collaborative set of designated requirements that addressed the best environmental and economic uses to the local community and the economic profile of the City of Chicago.

The Fisk and Crawford coal fired power plants, built in 1902 and 1925, occupied 22 and 72 acres, respectively, of valuable waterfront property, but contributed a fraction of the operations revenue to the approximately \$7 billion budget for Cook County and the City of Chicago. These plants are located in an urban area with robust economic diversification and are symbolic of a successful campaign to end the negative health impacts of coal plants on low-income neighborhoods. They serve as a model for state and local governments to lead a stakeholder-based approach to transition, but represent the exception rather than the norm with respect to the fiscal impacts of closure.<sup>46</sup>

Like many aging facilities operating beyond the average useful life of electric generating units, the Fisk and Crawford facilities had been the subject of numerous violations of the Clean Air Act for emissions exceeding regulatory limits, increased frequency of plant malfunctions that

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<sup>44</sup> *Id.*

<sup>45</sup> Legislative History, available at <http://fresh-energy.org/2015/10/xcel-energy-proposes-nation-leading-transition-from-coal-energy-to-renewables/>.

<sup>46</sup> City of Chicago's 2012 Budget available at [http://www.cityofchicago.org/dam/city/depts/obm/supp\\_info/2012%20Budget/2012BudgetOverview.pdf](http://www.cityofchicago.org/dam/city/depts/obm/supp_info/2012%20Budget/2012BudgetOverview.pdf); see also Nochur, Adiya K. "Planning for Power Plant Transition: Lessons Learned from Communities in Massachusetts," June 2013, available at <http://www.mass.gov/eea/docs/eea/salem-harbor/nochur-thesis-coal-plant-transition-ma.pdf>.

created bottlenecks on the grid leading to several massive power outages, and were the focus of targeted activism by neighborhood community groups that were increasingly intolerant of the environmental threats compromising the health and quality of life in the Pilsen and Little Village neighborhoods.<sup>47</sup>

A month after the announcement of the closures of the Fisk and Crawford plants by Midwest Generation, Chicago's Mayor, Rahm Emanuel, created the Fisk and Crawford Reuse Task Force to collect community input and develop a shared vision for the redevelopment of the brownfield sites.<sup>48</sup> The taskforce had its roots in a network of community organizations, the Little Village Environmental Justice Organization (LVJEO) and Pilsen Environmental Rights and Reform Organization (PERRO), that had a long history of fighting for the closure of the facilities on behalf of families that lived near the plants. The Delta Institute, as an outside consulting firm, acted as a facilitator for guiding the group towards consensus and supporting the preparation of a final report summarizing a series of recommendations for reuse of the site. The Task Force established nine Guiding Principles for the redevelopment of the site that included:

- Enhancing the ability of residents and businesses to live, work, and play in a healthy environment;
- Prioritizing quality, living-wage jobs;
- Identifying and pursuing resources for redevelopment;
- Recognizing the existing constraints and context for the redevelopment; and
- Encouraging collaboration of stakeholders on redevelopment, noting that it will likely lead to the best outcome for all.<sup>49</sup>

Following completion of the final report, in 2015, the Chicago Transit Authority and NRG Energy entered into a memorandum of understanding to explore potential redevelopment

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<sup>47</sup> Lydersen, Keri. "Closing the Cloud Factories: Lessons from the fight to shut down Chicago's Coal Plants," Midwest Energy News, 2014, available at <http://midwestenergynews.com/files/2014/04/closing-the-cloud-factories.pdf>.

<sup>48</sup> City of Chicago's Mayor's Fisk and Crawford Reuse Task Force, "Final Report: Fisk and Crawford Reuse Task Force: Process, Principles, and Recommendations," DELTA Institute, September 2012, available at [http://delta-institute.org/delta/wp-content/uploads/Fisk\\_Crawford\\_Reuse\\_Task\\_Force\\_Sept-2012.pdf](http://delta-institute.org/delta/wp-content/uploads/Fisk_Crawford_Reuse_Task_Force_Sept-2012.pdf).

<sup>49</sup> *Id.*

of the Fisk plant as a bus garage and maintenance site.<sup>50</sup> Although work has not been completed, establishing the Task Force, completing the study and getting to the planning and negotiation stage represents meaningful progress toward developing a workable solution.

### **1.4.3 Case Study: Boardman Plant (Idaho)**

Among the early findings of the research team were a number of potential liabilities either borne by the owner/operator or by ratepayers of the soon-to-be retired facility. Decision making concerning the retirement of the Boardman plant in Idaho presents an example of how the plant addressed the loss of investments in plant infrastructure in a regulated environment. Regulators considered how the costs associated with decommissioning a retired coal plant may increase electricity rates for consumers where the utilities sought to recover such costs from the rate base.

In response to rising environmental compliance costs that made continued operation of the plant beyond 2020 economically impractical, Idaho Power and Portland General Electric opted to shut down the 33 year old Boardman coal-fired power plant to avoid substantial investments in major new environmental retrofits, even though the utility's assets had not been fully depreciated, leaving stranded costs on the books.<sup>51</sup> Here, the utility operated in a regulated market and Idaho Power needed the Public Utility Commission's approval to accelerate the depreciation of its share of the coal plant.<sup>52</sup>

The Idaho PUC granted Idaho Power a rate hike of 0.181%, representing \$1.5 million, allocated between customer classes in order to fund the decommissioning process. The plant's retirement is projected to cost the company a total of \$53.8 million, mostly due to the accelerated rate of the plant's depreciation. The Idaho PUC's order described the process as follows: "With this Application, the Company asked to recover the levelized revenue requirement, which included (1) the return associated with Boardman capital investments, net of accumulated

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<sup>50</sup> Powers, Rosie. "Mayor Emanuel Announces Next Steps to Transform Fisk Coal Plant Site Into Community Asset," PERRO, February 16, 2016, available at <http://pilsenperro.org/mayor-emanuel-announces-next-steps-to-transform-fisk-coal-plant-site-into-community-asset/>.

<sup>51</sup> Miller, Ken. "Putting Down a Coal Plant: Retiring a Utility Asset," Snake River Alliance, September 2013 available at <http://snakeriveralliance.org/wp-content/uploads/2013/10/Putting-Down-a-Coal-Plant-Retiring-a-Utility-Asset.pdf>.

<sup>52</sup> *Id.*

depreciation forecasted through Boardman’s remaining life; (2) the costs of accelerating the Boardman depreciation and (3) the decommissioning costs associated with the Boardman shutdown. The Company replaced the base rate revenue recovery associated with the Company’s existing investment in Boardman with a levelized revenue requirement to be tracked in the balancing account.”<sup>53</sup> The procedure also included the creation of a regulatory asset whereby the utility recorded the financial impacts related to the early plant closure by tracking the costs and revenues that were kept off of the utility’s income statement for tax purposes until the plant was actually retired.<sup>54</sup>

The Boardman Plant case study provides some insight into regulators’ decision making and the considerations that may influence the approach by which operators address significant power plant improvements and utility restructuring on their balance sheets and over time.

#### **1.4.4 Case Study: Consumers Energy Muskegon (Michigan)**

Consumers Energy (CE) petitioned the Michigan Public Service Commission to approve a bond issue to cover costs pertaining to the closure, decommissioning and demolition of three coal-fired power plant facilities: Units 4 and 5 of the B.C. Cobb Plant (312 MW); Units 7 and 8 of the J.C. Weadock Plant; and Units 1, 2 and 3 of the J.R. Whiting Plant (325 MW). Collectively the plants are referred to as the “Classic Seven.” CE concluded that these facilities would cease operations by 2016, when the installation of additional emissions control technologies necessary to achieve compliance with EPA regulations would become uneconomical. In December 2013, the Michigan Public Service Commission approved a \$389.6 million securitization bond, eliminating the \$64.7 million CE had asked for associated with the demolition of the three plants. According to the company’s website, “the move will allow Consumers to continue its pursuit of renewable energy and meet the U.S. EPA’s Mercury and Air Toxics Standard rule.”<sup>55</sup>

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<sup>53</sup> *Id.*

<sup>54</sup> *Id.*

<sup>55</sup> MichiganLive.com, “Consumers Energy Bids Adieu to the ‘Classic Seven’ Coal Plants,” [http://www.mlive.com/business/jackson-lansing/index.ssf/2016/03/consumers\\_coal\\_shut\\_down.html#3](http://www.mlive.com/business/jackson-lansing/index.ssf/2016/03/consumers_coal_shut_down.html#3).

The BC Cobb plant is Muskegon County's largest taxpayer, provides more than 17 percent of the city's property base, and employs approximately 115 workers as of the date of plant's closure.<sup>56</sup> The plant sits on 300 acres of land on the banks of the Muskegon Lake, where it feeds into the Muskegon River.<sup>57</sup> The JR Whiting plant provided 50 percent of the City of Luna Pier's tax revenues,<sup>58</sup> and the City began working with CE in 2008 to replace revenues lost by the J.R. Whiting plant's closure. In 2009, the City of Luna Pier Planning Commission, pursuant to the Michigan Planning Enabling Act,<sup>59</sup> adopted the City of Luna Pier Master Plan to support the continued development and appropriate redevelopment of the city.<sup>60</sup> The Master Plan was funded by a grant provided by the Michigan Coastal Management Program (MCMP) and the Michigan Department of Environmental Quality. Coastal Zone Management (CZM) grant funds were awarded to the Monroe County Planning Department to work with the Luna Pier Planning Commission to prepare the master plan in January 2009.

In early 2014, CE entered into a contract with AMEC Foster Wheeler (AMEC), a London-based global engineering and project management company, for the decommissioning and demolition of the facilities. AMEC also completed a detailed analysis regarding future use recommendations of the site. The 1,000 acre waterfront site is particularly attractive for redevelopment because it has one of the newest, deep-water accesses to Muskegon Lake and a dock that provides numerous opportunities for redevelopment.<sup>61</sup>

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<sup>56</sup> Alexander, Dave. "Demolition of Muskegon's B.C. Cobb Plant Up for Consideration By Commission," MLive, October 30, 2013 available at [http://www.mlive.com/news/muskegon/index.ssf/2013/10/michigan\\_utility\\_regulators\\_re.html](http://www.mlive.com/news/muskegon/index.ssf/2013/10/michigan_utility_regulators_re.html).

<sup>57</sup> MichiganLive.com, "Consumers Energy Bids Adieu to the 'Classic Seven' Coal Plants," [http://www.mlive.com/business/jackson-lansing/index.ssf/2016/03/consumers\\_coal\\_shut\\_down.html#3](http://www.mlive.com/business/jackson-lansing/index.ssf/2016/03/consumers_coal_shut_down.html#3).

<sup>58</sup> BLADE Staff. "Luna Pier Coal-Fired Plant to Shut in '15," Toledo Blade December 3, 2011, available at <http://www.toledoblade.com/Nation/2011/12/03/Luna-Pier-coal-fired-power-plant-to-shut-in-15.html>.

<sup>59</sup> Michigan Public Act. No.33 of 2008.

<sup>60</sup> City of Luna Pier, Master Plan 2010. Available at <http://www.cityoflunapier.com/Portals/44/Luna%20Pier%20Master%20Plan%20Cover%20and%20Acknowledgements%20-%20Screen%20Re.pdf>.

<sup>61</sup> Alexander, Dave. "Consumers Energy Hires Global Engineering Company to Decommission B.C. Cobb," February 13, 2014, available at [http://www.mlive.com/news/muskegon/index.ssf/2014/02/consumers\\_energy\\_hires\\_global.html](http://www.mlive.com/news/muskegon/index.ssf/2014/02/consumers_energy_hires_global.html).

As one transition strategy, City of Luna Pier sought to increase tourism and attract business.<sup>62</sup> The community received a \$500,000 grant from the Michigan Natural Resources Trust fund to build an accessible beach house with an observation deck and kayak livery, as well as a \$100,000 federal grant to build bio-retention gardens.<sup>63</sup> However, these initiatives have not been sufficient to meet the budget shortfall created by the J.R. Whiting plant's closure. Prior to the plant's closing, the city received approximately \$ 613,216.96 annually. For the 2016 fiscal year, the city was expected to receive \$73,728.<sup>64</sup> The loss in revenue has resulted in cuts to the police department and both the department of public works and wastewater department from the Department of Municipal Services.<sup>65</sup>

#### **1.4.5 Case Study: Mohave Generation Station Nevada and the Just Transition Coalition (JTC)**

The Mohave Generating Station was a 1,580 MW coal fired power plant operated by Southern California Edison (SCE) and owned by a utility consortium of Southern California Edison, LADWP, Nevada Power and Salt River Project. The facility initiated operations in 1971 and was fueled by a coal slurry pipeline 273 miles away from Peabody Energy's Black Mesa Mine, located on land owned by the Navajo and Hopi tribes in Kayenta, Arizona.<sup>66</sup> In the 1960's the Hopi and Navajo tribal councils approved leasing Black Mesa coal to Peabody Coal Company, with the royalties of those leases providing 80 percent of the Hopi general budget and 60 percent of the Navajo general fund budget. For over thirty years, Mohave Generating emitted millions of tons of soot, nitrogen oxides, and mercury pollution annually. In addition to air emissions, the annual removal of over a billion gallons of water from the Navajo Aquifer that fed the coal slurry between the Black Mesa Coal Mine and the Mohave Station contributed to water toxicity and loss of water supply. Over 300 jobs disappeared when the Mohave Station shutdown

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<sup>62</sup> BLADE Staff. "Luna Pier Coal-Fired Plant to Shut in '15," Toledo Blade December 3, 2011, available at <http://www.toledoblade.com/Nation/2011/12/03/Luna-Pier-coal-fired-power-plant-to-shut-in-15.html>.

<sup>63</sup> *Id.*

<sup>64</sup> Portteus, Danielle. The Monroe News, "Power Outage," April 11, 2016, available at <http://www.monroenews.com/article/20160411/NEWS/160419934>.

<sup>65</sup> *Id.*

<sup>66</sup> Nace, Ted. "Climate Hope: On the Front Lines of the Fight Against Coal," *Coal Swarm*, (2010). Print. Nace details the irony that despite the fact that both the facility and the mine employed Navajos and Hopis, 80 percent of Navajo people lacked running water and 50 percent lacked electricity despite huge transmission lines running across the reservation.

on December 31, 2005 as result of a consent decree to settle a 1998 Clean Air Act lawsuit, and because of resolutions signed by the Navajo and Hopi tribes to end Peabody's use of water from the Black Mesa aquifer.<sup>67</sup>

As one of the highest emitters of sulfur dioxide in the western United States, Southern California Edison received pollution credits under the U.S. Acid Rain program administered by the EPA once Mohave shut down. After 2005, pollution credits began accumulating for Southern California Edison at the rate of an estimated \$30 million annually. An alliance of groups, including the Indigenous Environmental Network, Honor the Earth Foundation, Appollo Alliance, Black Mesa Water Coalition, To'Nizhoni Ani, Grand Canyon Trust and Sierra Club formed a coalition called the "Just Transition Coalition". The Just Transition Coalition proposed that annual revenues from the sale of pollution credits from the Mohave plant be reinvested in renewable energy on tribal lands and be used to offset the economic burden of lost coal royalties and jobs.<sup>68</sup>

The Just Transition Coalition submitted a formal motion to the California Public Utilities Commission (CPUC) requesting that funds from the sale of pollution credits be allocated by contributing 30 percent to local villages and chapters to invest in solar, wind and eco-tourism; 40 percent for alternative energy development and production; and 20 percent for tribal government to help sustain programs cut due to the loss of royalty income. The California Public Utilities Commission approved a "Just Transition Plan" that allows revenue from the sale of pollution credits accrued by Southern California Edison to be placed into an escrow account. From the escrow account, the funds were redirected for use by Navajo and Hopi tribes for renewable energy projects. While Mohave Generating Station was shuttered in 2005, it was not until 2013, following litigation by the operator, and after nearly a decade of public protests and hearings, before the CPUC determined that only projects that would protect the environment and benefit the Navajo and Hopi communities could qualify for disbursement from SCE.<sup>69</sup> The results of the

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<sup>67</sup> Edwards, John G. "Laughlin Coal-Fired Power Plant Going Away," *Las Vegas Review Journal*, June 11, 2009, available at <http://www.reviewjournal.com/business/laughlin-coal-fired-power-plant-going-away>.

<sup>68</sup> Nace, Ted. "Climate Hope: On the Front Lines of the Fight Against Coal," *Coal Swarm*, (2010). 143. Print.

<sup>69</sup> Rosenfeld, Ethan. "Transition Plans for Coal-Fired Power Plant Closings: Stability, Opportunity, & Community," *Journal of Energy & Environmental Law*, Spring 2015, available at [https://gwujeeel.files.wordpress.com/2015/07/jeel\\_vol6\\_issue2\\_rosenfeld.pdf](https://gwujeeel.files.wordpress.com/2015/07/jeel_vol6_issue2_rosenfeld.pdf).

Just Transition Plan are unclear, as few large-scale renewable energy projects have been developed with funds from the sale of pollution credits to generate jobs within the Navajo reservation. Some community members point to the collapse in the market for credits as the cause.<sup>70</sup>

#### **1.4.6 Case Study: Centralia, Trans Alta Plant (Washington State)**

Environmental stakeholders, who were interested in curbing environmental degradation and the detriments to human health, led the charge to close aged coal-fired power plants in Washington State. During negotiation of the terms and conditions for closure of the Centralia Plant in Washington State, environmentalists assisted in negotiating for continued operations of the plant under certain conditions that helped older workers who were within years of retirement to retain benefits.

Historically, income replacement schemes have varied among federal, state and local programs and are not always a viable option for older workers. Older workers are likely to see steeper decreases in earnings at new employment and are less likely to enroll in education and training programs. Research has found that under the best-case scenarios, income and benefit replacement should match the length of time that training assistance is provided to ensure that workers can complete their training program and move on to better opportunities. As an imperative for New York State, older workers should and must be protected and provided an adequate bridge to retirement that preserves their pension and health benefits while providing an equivalent income for an extended period of time. Worker assistance programs must be sufficiently funded to fulfill their intended purpose and provide full benefits to all eligible workers.<sup>71</sup>

In 2011, environmental and labor groups reached an agreement with the TransAlta corporation after appeals to pull the plant's air pollution permit due to significant mercury and carbon dioxide emissions and haze pollution. Initial efforts were made to close the plant by 2015

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<sup>70</sup> Carlton, Jim. "The Path From Coal to Renewable Energy Can Be Difficult," The Wall Street Journal, May 5, 2015, available at <http://www.wsj.com/articles/the-path-from-coal-to-renewable-energy-can-be-difficult-1430881487>.

<sup>71</sup> Whittaker Julie M. and Blake Alan Naughton. "Federal Programs Available to Unemployed Workers," Cornell University ILR School, November 14, 2007, available at [http://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=1475&context=key\\_workplace](http://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=1475&context=key_workplace).



and retrain the 300 workers at the facility. With the assistance of Washington’s Governor Gregoire, the company negotiated with environmentalists to continue to operate to protect jobs and maintain reliability. The extension in the deadline for compliance allowed 40 percent of the employees to reach retirement age before closure of the facility and gave non-retiring employees another 8 years in their current jobs.<sup>72</sup> The extension of time for compliance in addition to other concessions provided leverage for the company to agree to provide \$30 million to a community investment fund and \$25 million for an energy transition fund.

Actual project development was slated to begin from December 31, 2015, and is projected to include providing energy efficiency and weatherization for Lewis and South Thurston County governments, residents and employees, and local businesses and organizations, with a carve-out specifically for low- to moderate-income residents; support for displaced Centralia plant workers, including education, retraining and economic development; and funding for “energy technologies with the potential to create environmental benefits” for Washington.<sup>73</sup>

Through negotiation, stakeholders derived benefits for labor, TransAlta, the future of economic development in Lewis County, and the clean energy future for the state of Washington.

#### **1.4.7 Case Study: State and Regional Policies to Mitigate Transition Impacts: Massachusetts & RGGI**

The Commonwealth of Massachusetts’ report from the Salem Harbor Revitalization Task Force offers one of the most robust sources of information on how federal, state, and local government officials, along with other relevant stakeholders, are currently engaged in a comprehensive planning process to evaluate the options to reuse and redevelop the site of the recently closed Salem Harbor coal-fired power plant. Governor Deval Patrick signed an act into law<sup>74</sup> that created a task force charged with adopting a plan for the demolition, remediation, and redevelopment of the Salem Harbor site. The statewide task force was charged with developing a process by which all Massachusetts communities impacted by the closure of coal-fired power

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<sup>72</sup> Brecher, Jeremy. “Jobs Beyond Coal: A Manual for Communities, Workers, and Environmentalists, Labor Network for Sustainability,” 2012, available at <http://report.labor4sustainability.org/#!/case-studies/>.

<sup>73</sup> Press Release. TransAlta USA, “\$55 million community development, energy efficiency investment moving ahead,” July 30, 2015, <http://www.transalta.com/us/2015/07/55-million-community-development-energy-efficiency-investment-moving-ahead-2/>.

<sup>74</sup> Massachusetts (Commonwealth). Session Laws Acts 2012 Chapter 209 Section 42.

plants ranked the following as priorities for economic development: public access and use of the waterfront; maximum utilization of transmission assets of the facility; reliability of electricity to the grid; public access to roads; and other infrastructure assets.

The task force members represent state and local leaders in energy policy and economic development. The task force was charged with meeting two statutory requirements and time frames. The first prioritized a plan for the Salem Harbor Power Station by June 15, 2013, and the second established a December 31, 2016, deadline to identify and develop a plan for other coal-fired power plants around the state. Task force members were charged with integrating policy procedures, impacts, and impediments to reuse and develop policy options.

According to ISO New England, coal-generated electricity dropped from 18% in 2000 to only 3% in 2012 within the region. Market changes that contributed to the decreased reliance on coal in the region included significant drops in energy market prices, declines in capacity prices, flattened demand, an increase in coal prices, and low natural gas prices.<sup>75</sup> Together these factors crippled operators of coal-fired generation units and turned once profitable facilities into money losing operations that were unable to generate returns sufficient to cover operating expenses and debt.

Between 2011 and 2014, announced and anticipated retirements at the Mt. Tom plant in Holyoke, MA; the Salem Harbor Station in Salem, MA; and the Brayton Point Station in Somerset, MA heralded the coming of the end to the coal era in the Commonwealth of Massachusetts. While the end of coal generation at these plants represented a victory for environmentalists and health advocates, the closures were projected to impact hundreds of workers, many of whom made their careers at the facilities. Local governments were charged with addressing the fiscal impact of losing the biggest taxpayers for their municipalities. For the Salem Harbor station, the plant's closure presented two dilemmas for the Town of Salem: how to replace its biggest taxpayer and what to do with the 60 acres of waterfront property when the plant closed.

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<sup>75</sup> Sanzillo, David and Tom Schlissel. "Dark Days Ahead: Financial Factors Cloud Future Profitability at Dominions' Brayton Point," Institute for Energy Economics & Financial Analysis, March 2013, available at <http://ieefa.org/report-dark-days-ahead-financial-factors-cloud-future-profitability-at-dominions-brayton-point/>.

In July 2013, Governor Deval Patrick and the Massachusetts Legislature worked together to allocate not less than \$100,000 from the Massachusetts Clean Energy Center (MassCEC) to conduct a comprehensive study, including site assessments, potential land uses, and redevelopment and remediation options to quantify the economic costs to local communities from the plant closures. Additionally, between 2011 and 2016, the town of Salem will make up for Dominion's dwindling \$4.75 million tax bill with state money.<sup>76</sup> The law also permits the Commonwealth to provide reimbursements to the City of Salem for multiple years, and to Holyoke and Somerset for the most recent year of property tax receipts, including payments in lieu of taxes that are reduced as a result of decommissioning, requirements of the Regional Greenhouse Gas Initiative, and proposed regulation of carbon dioxide emissions from electric generating stations. The funds to provide assessments and tax relief are due in part to the Commonwealth's auction proceeds from participation in RGGI.<sup>77</sup>

As described above, in cooperation with the states of Connecticut, Delaware, Maine, Maryland, New Hampshire, New York, Rhode Island, and Vermont, Massachusetts's role as a partner in RGGI enabled a market-based source of revenue to assist in investment in clean energy initiatives. While proceeds from RGGI auctions were intended to improve energy efficiency programs and accelerate the deployment of renewable energy technologies, for Massachusetts, those proceeds have been used to support legislative efforts to address the costs associated with decommissioning, remediation, and reuse of announced and anticipated retirements of coal-fired power plant sites.

#### **1.4.8 Case Study: Appalachian Regional Commission**

In 2005, the Appalachian Regional Commission (ARC) compared worker displacement trends in the Appalachian region with the rest of the United States through surveys conducted by the Bureau of Labor Statistics. The results of those surveys found that overall, displaced workers

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<sup>76</sup> Capiello, Dina. "AP Impact: EPA rules threaten older power plants," Associated Press, December 19, 2011, available at [http://www.boston.com/news/local/massachusetts/articles/2011/12/19/ap\\_impact\\_epa\\_rules\\_threaten\\_older\\_power\\_plants/?page=3](http://www.boston.com/news/local/massachusetts/articles/2011/12/19/ap_impact_epa_rules_threaten_older_power_plants/?page=3).

<sup>77</sup> Salem Harbor Power Station Plant Revitalization Task Force - Coal-Fired Power Plant Decommissioning Subcommittee Final Report, February 12, 2014, at 6, available at <http://www.mass.gov/eea/energy-utilities-clean-tech/salem-harbor/decom-subcommittee-final-report.pdf>.

in the Appalachian region were less likely to find alternative jobs when compared with other displaced U.S. workers.<sup>78</sup> A lower proportion of Appalachian workers managed to find re-employment, and if they were employed, they were more likely to earn less than they did in their previous job.<sup>79</sup> The comparatively higher rates of unemployment in the region is attributed to the decline in the coal industry, the existing high poverty rate, and lower levels of formal education.<sup>80</sup>

Direct employees, those employed at the coal-fired generation units, are characterized as being in the industry for at least 10 years and likely to have entered the workforce at a relatively young age. The direct employees within the generation industry are generally well paid and often employed at annual salaries above the regional average. The average utility worker is male, 50 years old and typically close to retirement age. The opportunity to negotiate for generous severance packages on behalf of more senior direct employees can provide an opportunity for mitigating the impacts of job loss under certain circumstances.<sup>81</sup> The case study provides initial considerations concerning potential workforce initiatives upon review of relevant demographic data.

Under the allocation of \$95 million in the fiscal year 2016 President's budget, the ARC will provide \$25 million to support the Administration's POWER+ (Partnerships for Opportunity and Workforce and Economic Revitalization) Plan. Funds will be available for economic development planning and implementation activities, including developing entrepreneurial ecosystems, facilitating access to capital investments and new markets, and addressing barriers related to adequate water, sewer, and telecommunication infrastructure. This initiative will help communities to diversify their economies; create good jobs in existing or new industries; attract new sources of job-creating investment; and provide reemployment services and job training to dislocated workers in order to connect them to high-quality, in-demand jobs. Examples of

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<sup>78</sup> See statistics available at [http://www.arc.gov/assets/research\\_reports/DataOverviewfrom2010to2014ACS.pdf](http://www.arc.gov/assets/research_reports/DataOverviewfrom2010to2014ACS.pdf).

<sup>79</sup> Herzenberg, S., Price, M. and Wial, H. (2005) Displacement in Appalachia and the Non-Appalachian United States 1993-2003, Findings Based on Five Displaced Worker Surveys, available at [http://www.arc.gov/assets/research\\_reports/DisplacementAppalachiaandNonAppalachianUS1993to20031.pdf](http://www.arc.gov/assets/research_reports/DisplacementAppalachiaandNonAppalachianUS1993to20031.pdf).

<sup>80</sup> *Id.*

<sup>81</sup> Greenwald, Judith M. et al. "Community Adjustment to Climate Change Policy," Pew Center on Global Climate Change, December 2001, at 7.

emerging opportunity sectors supported by this initiative include advanced manufacturing, support for new and emerging technologies for the generation and distribution of energy, improving access to capital for renewable energy/energy efficiency projects, support for local food systems and tourism development, and fostering new health care enterprises and employment.<sup>82</sup>

## **1.5 Decommissioning, Remediation and Redevelopment**

In addition to providing communities fiscal support for the loss of PILOT payments and instituting workforce support policies to ease the burdens of employment loss, there are opportunities for New York State to ensure that the facilities at obsolete electric generation units are provided funding to facilitate full decommissioning, remediation and redevelopment upon negotiation with the operators of those facilities. Fully remediating plants avoids prolonged potentially unsafe sites and provides new sources of tax revenue to restore economic activity. The following case studies are examples of abandoned sites that were successfully transformed into thriving redevelopment projects.

### **1.5.1 Case Study: Moran Municipal Generation, Burlington, VT (1986)**

The Moran Generation Station was a 30 MW coal-fired power plant that began operating in 1952 and, after 30 years of operations, was decommissioned and left vacant for over a decade. Beginning in 2010, the city of Burlington, Vermont began to rehabilitate the site for mixed community use, including an incubation center, a community studio, restaurant, brewery, and recreational spaces.<sup>83</sup> While initial funding for planning was raised through a crowdfunding platform, more substantial funding was raised through a voter referendum to allocate \$6.3 million in Tax Increment Financing (TIF) funds to complete the \$34.5 million redevelopment project. The project provides an example of a locally funded initiative that reconnects the community to the waterfront property once occupied by a coal-fired power plant.

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<sup>82</sup> Delta Institute. “Transforming Coal Plants into Productive Community Assets,” October 2014 available at <http://delta-institute.org/delta/wp-content/uploads/Coal-Plant-Overview-Report-10-21-14.pdf>.

<sup>83</sup> *Id.*

### **1.5.2 Case Study: Homan Square Powerhouse, Chicago, IL (2004)**

The Homan Square Powerhouse redevelopment is an example of how facilities with structures ideal for historic preservation may provide attractive sites to repurpose industrial facilities for mixed-use housing, commercial development and community services, and include multiple buildings listed on the National Register of Historic Places.<sup>84</sup> The Homan Square Powerhouse, built by Sears, Roebuck and Co. in 1905, provided onsite generation for the 55-acre complex. The facility significantly reduced generation until its full decommissioning in 1973. For nearly two decades, the building was deteriorating and vacant before City officials, community leaders, and business representatives from the surrounding North Lawndale area worked with developer Charlie Shaw. Approval of the new development plan ultimately led to an executed redevelopment project between 2007 and 2009 through a combination of private funding from Sears and public funding from the City of Chicago at a total cost of \$40 million. The site is now run by a nonprofit organization, Foundation for Homan Square, and houses the Henry Ford Academy Charter School, or Power House High. The developer met with the Chicago Mayor, elected officials and community and business leaders. The city's commitment to the project included millions of dollars in road, sewer and infrastructure improvements.

### **1.6 Decommissioning and Redevelopment; Lessons Learned from the Potomac River Generating Station**

The above case studies are examples of fully engaged community participation initiatives that fostered public-supported planning processes that enabled the local communities to capitalize on waterfront assets and restore and reclaim a source of economic development on what were otherwise abandoned and potentially unsafe industrial sites. By committing public funding to a planning process, local governments are able to restore economic activity and integrate industrial sites into future plans for the community.

As a final example, the Potomac River Generating Station (PRGS), was a 5 unit, 514 MW coal-fired power plant located in Alexandria, Virginia. The facility entered into commercial operations between 1949 and 1957. The facility, owned by GenOn Energy, was situated on a 25-

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<sup>84</sup> See [www.homansquare.org](http://www.homansquare.org).

acre site on the Potomac River in a residential district just outside of Washington, D.C. Environmental and community activists, including the Sierra Club, Chesapeake Climate Action Network, Greenpeace, American Clean Skies Foundation, the American Lung Association, and Interfaith Power and Light, fought the plant for nearly a decade. By 2011, the environmentalists were joined by Washington, D.C. Mayor Vincent Gray in expressing concern about emissions from the facility given the limited contribution the facility made to reliability on the grid. An Analysis Group study found that the plant could be shut down “without adversely impacting the power supply to the nation’s capital.”<sup>85</sup> Shortly thereafter, the American Clean Skies Foundation (ACSF) released a \$450 million redevelopment plan that would transform the waterfront site to an environmentally friendly mixed-use community.<sup>86</sup>

The plan, called “Potomac River Green,” was initiated by ACSF’s Chief Executive and was the product a year-long collaboration of architects, urban planners, financial advisers and utility consultants. The landowner, Pepco, subdivided the parcel, whereby the first 20-acre parcel contains the shuttered power plant with another 5.78 acre parcel that contains Pepco’s still operational switching yard and parking lot. It is anticipated that the site will be sold to NRG Energy. The 25 acres of riverfront property in Alexandria, Virginia with views of the Washington Monument are now part of North Potomac River Green’s mixed-use development plan. The plan features space for a hotel, retail and restaurants, multi-family and townhouse units, office space, fast-charge electric car refueling stations and a working Energy Museum.<sup>87</sup>

The PRGS was part of a number of case studies conducted by ACSF that provide the following lessons about redevelopment:

- **Costs, Timeframes and Financing:** Costs for the redevelopment of aging power plants can range from \$40 million to \$80 million for mid-size developments to as much as \$150

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<sup>85</sup> American Clean Skies Foundation, “Alexandria Coal Plant Could Be Retired Without Affecting Power Reliability,” July 20, 2011 available at <http://www.cleanskies.org/wp-content/uploads/2011/07/PRGSpressrelease072011-1.pdf>.

<sup>86</sup> American Clean Skies Foundation Unveils Potomac River Green Project, August 10, 2011 available at <http://www.businesswire.com/news/home/20110810005310/en/American-Clean-Skies-Foundation-Unveils-Potomac-River>.

<sup>87</sup> Banister, Jon, “Development of 25 acre Alexandria Riverfront Site Takes Step Forward,” available at <https://www.bisnow.com/washington-dc/news/land/development-of-25-acre-alexandria-riverfront-site-takes-a-step-forward-61290>.

million to \$180 million for larger plants. The costs include decommissioning and demolition costs of between \$30 million and \$50 million for 500 MW facilities. Developers must consider the significant upfront costs and the time for completion. There are significant public financing options, including the EPA Revolving Loan Fund; EDA's economic development funds; and HUD Block grants, as well as tax incentives such as the low-income housing tax credit, energy efficiency incentives and new markets tax credits.

- **Community Involvement and Implications:** It is important to engage community leaders in the planning and development of the site. In cases where efforts to reuse the power plant site have been led by private developers or utilities, developers have collaborated with municipal agencies, the city and the general public to meet community needs. For instance, developers of the Cannon Street Station have considered community needs in moving away from the concept of an “island” casino and theater. The revised plan will encourage the use of Bedford's existing performance sites, restaurants and shops.
- **Design and Reuse:** Old coal plant sites present tremendous redevelopment opportunities. Their scale is impressive and can help revitalize whole neighborhoods and regions. Many sites provide a unique environment and amenities, including waterfront access. That proximity was leveraged by architects working on repurposing the old Ottawa Street Station in Lansing, Michigan. The plan for this site extends the city's river trail system and adds an extensive riverside patio.
- **“LEED” Certification and Sustainable Construction:** Developers of many old power plant sites have also embraced clean energy and green building practices. In nearly all U.S. projects, the benchmark for building certification is the Green Building Council's Leadership in Energy and Environmental Design (LEED) designation. LEED buildings exemplify sustainable site development and materials selection; they also maximize energy efficiency, water savings and improved indoor environmental quality.<sup>88</sup>

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<sup>88</sup> Potomac River Green, American Clean Skies Foundation Releases Study: Repurposing Legacy Power Plants, available at <http://www.potomacrivergreen.org/american-clean-skies-foundation-releases-study-repurposing-legacy-power-plants/>.



After years of planning, the City of Alexandria is now undertaking an Environmental Impact Statement (EIS) process for a new Metrorail Station, in cooperation with the Washington Metropolitan Transit Authority (WMATA), that is central to the development. As of June 16, 2016, the City Council for the City of Alexandria has approved the Master Plan Amendment, Map Amendment (rezoning) and Development Special Use permits for the site.<sup>89</sup> Like many redevelopment plans contemplated by communities living alongside riverfront coal-fired power plants, the project will reconnect residents to the waterfront.

## 2. Four New York Generators Facing Full or Partial Retirement

This section describes four New York electricity generators that are facing partial or full retirement or are reducing their payments to the local municipalities due to decreased electricity production and the rising cost of operations. The generators and communities operate under PILOT agreements, which, in most instances, are administered by the county Industrial Development Agency (IDA). PILOT agreements incentivize industrial development by exempting industrial facilities from taxes in exchange for an agreement to pay a pre-determined amount of money to the party jurisdictions over an agreed-upon period of time.<sup>90</sup>

The coal-fired electric generation facilities listed below represent aging facilities, some of which are at the end of their useful life and have, by reasons of market drivers, announced their intent to mothball or retire. Closure of an electric generation unit in New York not only presents issues of lost economic activity within a community but also presents challenges of maintaining grid reliability without triggering litigation, federal regulatory scrutiny, or jeopardizing the operation of an efficient and competitive wholesale power market.

This report examined the following generators:

PLANT	OPERATOR	IMPACTED JURISDICTIONS
Dunkirk Electric Generating Station	Dunkirk Power LLC/ NRG Energy Inc.	County of Chautauqua Industrial Development Agency

<sup>89</sup> City of Alexandria, “Potomac Yard Metro Station Planning,” available at <https://www.alexandriava.gov/potomacyard/default.aspx?id=56902>.

<sup>90</sup> Office of the New York State Comptroller. Research Brief 2013 available at [https://www.osc.state.ny.us/localgov/pubs/research/propertytax\\_exemptions.pdf](https://www.osc.state.ny.us/localgov/pubs/research/propertytax_exemptions.pdf), at p. 7.

		Chautauqua County City of Dunkirk Dunkirk City School District
Cayuga	Cayuga Operating Company, Riesling Power, LLC	Tompkins County Industrial Development Agency Tompkins County Town of Lansing Lansing Central School District
Somerset	Riesling Power, LLC	Niagara County Industrial Development Agency Niagara County Town of Somerset Barker Central School District
Huntley Generating Station	Huntley Power, LLC	Erie County Industrial Development Agency Erie County Town of Tonawanda Kenmore-Town of Tonawanda Union Free School District.

Many communities where retiring or mothballed facilities are located represent areas that were already ravaged by declining unemployment as a result of plant closures during the deindustrialization era of the 1960’s through 1980’s. In many instances, the remaining coal-fired facilities are, or were, one of the few remaining industrial activities to provide substantial tax revenue, employment and other economic resources to the area.<sup>91</sup>

In some instances, including several of the plants described below, there are ongoing efforts to address the fiscal and social impacts of the facilities’ closures through temporarily retaining the generators based on transmission needs, until more permanent reliability solutions are in place.<sup>92</sup> While such short term remedies may be appropriate in certain circumstances to address an imminent closure, the future of the towns and school districts that are home to retiring facilities can be better supported by providing fiscal assistance tied to lost payment in lieu of

<sup>91</sup> Rosenfeld, Ethan. “Transition Plans for Coal-Fired Power Plant Closings: Stability, Opportunity & Community,” *Journal of Energy & Environmental Law*, Spring 2015, available at [https://gwujeeel.files.wordpress.com/2015/07/jeel\\_vol6\\_issue2\\_rosenfeld.pdf](https://gwujeeel.files.wordpress.com/2015/07/jeel_vol6_issue2_rosenfeld.pdf).

<sup>92</sup> Such agreements between the generator and impacted utility are commonly referred to as “Must Run,” “Reliability Must Run,” or “Reliability Support Services” agreements. Approval must be sought from either FERC or the New York Public Service Commission, depending on the type of agreement in question. See, e.g., 16 U.S.C. § 824e (2012), and 150 FERC ¶ 61,116, Docket No. EL15-37-000. February 19, 2015. (FERC RMR Dunkirk).

taxes arrangements. Greater support should also come in the form of state workforce training and other social programs that ensure New York State communities are fully participating in the possibilities of New York’s clean energy future.<sup>93</sup>

## **2.1 Current Operating Status and PILOT Agreements**

### **2.1.1 Dunkirk Electric Generating Station**

The Dunkirk Electric Generating Station (Dunkirk) is a 635 MW, four-unit coal-fired power plant located in the County of Chautauqua, outside of Buffalo. Dunkirk was constructed in the 1950’s and is owned by NRG Energy, Inc. (NRG) and operated by Dunkirk Power, LLC.<sup>94</sup> NRG is one of the nation’s largest owners of merchant power plants with an estimated \$16 billion in annual revenues and 51,000 MW of generating capacity.<sup>95</sup> For over 50 years, the facility provided substantial economic activity to Chautauqua County, the City of Dunkirk, and the Dunkirk City School District, including jobs and, more recently, annual PILOT payments accounting for a significant part of the city and school district’s budgets. In January 2016, Dunkirk mothballed its generating units, despite an initial effort to repower it with natural gas.

On April 25, 2008, Dunkirk Power, LLC, entered into a PILOT agreement with the County of Chautauqua Industrial Development Agency (the “Chautauqua IDA”). The PILOT payments are allocated between the County of Chautauqua, the City of Dunkirk, and Dunkirk City School District (collectively, the Dunkirk tax jurisdictions),<sup>96</sup> and extend through the 2027-2028 School District tax fiscal year, as well as the 2028 City and County tax fiscal year.

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<sup>93</sup> An additional consideration is that RMR agreements should be for a limited term so as not to perpetuate out-of-market solutions that could undermine price formation. See, e.g., FERC RMR Dunkirk citing See, e.g., PJM Interconnection, L.L.C., 107 FERC ¶ 61,112, at P 8 (2004); Calif. Indep. Sys. Operator Corp., 138 FERC ¶ 61,112 (2012); Calif. Indep. Sys. Operator Corp., 134 FERC ¶ 61,211 (2011); ISO New England, Inc. 125 FERC 61,102, order on clarification, 125 FERC ¶ 61,234 (2008), order denying reh’g, 130 FERC ¶ 61,089 (2010); Midwest Indep. Transmission Sys. Operator, Inc., 140 FERC ¶ 61,237 (2012).

<sup>94</sup> Opalka, William. “FERC Orders NYISO to Standardize RMR Terms in Tariff,” RTO Insider, February 23, 2015, available at <http://www.rtoinsider.com/ferc-nyiso-rmr-13221/>.

<sup>95</sup> Knauss, Tim. “Cuomo targets power plant that closed after \$110M subsidy by National Grid customers.” Syracuse Media Group, February 13, 2016, available at [http://www.syracuse.com/news/index.ssf/2016/02/cuomo\\_targets\\_power\\_plant\\_that\\_closed\\_after\\_110m\\_subsidy\\_by\\_national\\_grid\\_custom.html](http://www.syracuse.com/news/index.ssf/2016/02/cuomo_targets_power_plant_that_closed_after_110m_subsidy_by_national_grid_custom.html).

<sup>96</sup> The payment allocation percentages among the Dunkirk tax jurisdictions are not stated in the Dunkirk PILOT.

Under the original terms of the agreement, the annual PILOT payment is variable, in that it must be the greater of \$7 million (the floor payment, which can be adjusted upward to \$8.5 million in years when the company does not make minimum capital investments in the plant, as agreed) or an amount calculated by multiplying the company's basis for federal income tax purposes in the project's real property by the full value tax rate for the County of Chautauqua, not to exceed \$10,400,000.<sup>97</sup> In short, the as-agreed annual payments could vary from a minimum of \$7 million to a maximum of \$10.4 million, unless the facility's nameplate capacity changes, as further explained below.

The calculation of annual payments is indexed to the plant's nameplate capacity but not to actual annual net generation. Payments must be increased if the company adds additional units or makes other improvements that materially increase the plant's rated generating capacity. A "material" increase is considered "a cumulative aggregate increase of greater than five percent (5%) over 530 MW."<sup>98</sup> Payments may be reduced when there is partial retirement, damage or destruction for more than 6 consecutive months, in which case payments are calculated by multiplying the PILOT payment otherwise due by the nameplate capacity divided by 530 MW (PILOT \* [nameplate / 530]).<sup>99</sup> Payments can be stopped entirely only in the event the facility is damaged, destroyed, or fully or partially condemned and is thus rendered incapable of generating electrical power for distribution for more than six consecutive months.<sup>100</sup>

In April 2009, NRG executed a \$59 million tax-exempt bond financing issued by the County of Chautauqua Industrial Development Agency for the purpose of constructing emission control equipment with a bond maturity date of April 1, 2042.<sup>101</sup> But in March 2012, Dunkirk Power LLC filed a notice with the New York Public Service Commission (the Commission) of its intent to mothball the Dunkirk Station no later than September 2012, citing wholesale electric

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<sup>97</sup> Dunkirk PILOT Agreement Section 4(a)(i) and (iv).

<sup>98</sup> Dunkirk PILOT Agreement Section 4(c).

<sup>99</sup> Dunkirk PILOT Agreement Section 4(b)(i).

<sup>100</sup> Dunkirk PILOT Agreement Section 4(b)(ii).

<sup>101</sup> See 10k Filing for NRG Energy Inc, FY 2011 available at <https://www.sec.gov/Archives/edgar/data/1013871/000144530512000493/a201110-k.htm>. The fixed rate bonds are included in the debt service obligations of NRG and have a 5.875% interest, payable semiannually with a maturity date of April 1, 2042, and are supported by NRG as a guarantor.

prices and the cost of operating at a loss.<sup>102</sup> Niagara Mohawk Power Corp., d/b/a National Grid (National Grid), within whose service territory Dunkirk is located, advised the Commission that retiring the plant would pose reliability issues and that at least one generator would likely need to continue running through 2015 until transmission reinforcement work could be completed, based upon which the Commission directed NRG and National Grid to draft a Reliability Support Services Agreement (RSSA).<sup>103</sup>

The Commission approved the proposed RSSA between National Grid and NRG on May 20, 2013, to run for two years, until May 31, 2015,<sup>104</sup> and an extension was granted until December 31, 2015, to allow completion of the system reinforcement necessary to relieve reliability constraints.<sup>105</sup> Simultaneously with completing the transmission reinforcement, the Commission directed National Grid to “evaluate repowering over a long-run horizon of at least ten years, as an alternative to the transmission upgrades designed to address the retirement of the Dunkirk facility.”<sup>106</sup> In January 2014, the Commission announced that it had given regulatory approval to repower the Dunkirk power plant. Under the \$140 million agreement between National Grid and NRG, Dunkirk’s three coal-fired units would be repowered as natural gas facilities to improve the reliability of the electric system and provide economic benefits to Western New York by assuring operations for 10 years, with added capability to generate 435

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<sup>102</sup> Case 12-E-0136, Petition of Dunkirk Power LLC and NRG Energy, Inc. For Waiver of Generator Retirement Requirements, Notice of Intent to Mothball Dunkirk Units 1, 2, 3 and 4 (March 14, 2012).

<sup>103</sup> Case No. 12-E-0136, Order Deciding Reliability Need Issues and Addressing Cost Allocation and Recovery, May 20, 2013, at p. 2.

<sup>104</sup> *Id.*

<sup>105</sup> Case No. 12-E-0136, Order Deciding Reliability Issues and Addressing Cost Allocation and Recovery, May 18, 2015.

<sup>106</sup> Case No. 12-E-0577, Repowering Alternatives to Utility Transmission Reinforcements, Order Instituting Proceeding and Requiring Evaluation of Generator Repowering, January 18, 2013.

MW of natural gas.<sup>107</sup> The deal was hailed by Western New York politicians as a “Christmas miracle” that would preserve jobs and tax payments linked to the power plant.<sup>108</sup>

In response, Entergy Nuclear FitzPatrick, LLC sued the Public Service Commission on the grounds that it had exceeded its regulatory authority by interfering with FERC’s jurisdiction over “the sale of electric energy at wholesale in interstate commerce” under the Federal Power Act (16 U.S.C. § 824(b)(1)).<sup>109</sup> Entergy’s lawsuit cites analyses by National Grid that found that repowering Dunkirk would cost National Grid customers three to seven times per year more than the transmission solutions and further argued that the rate-payer subsidized conversion of Dunkirk would be illegal and discriminatory.<sup>110</sup> Rather than moving forward with the repowering plan, NRG opted to mothball the plant, citing concerns over the uncertainty and risk that the Entergy lawsuit created.<sup>111</sup> NRG’s decision to back away from the repowering agreement disappointed the Governor and local officials, who had been hopeful that the conversion would have retained Dunkirk’s employees and \$8 million a year in local property taxes. Governor

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<sup>107</sup> Case No. 12-E-0557, Repowering Alternatives to Utility Transmission Reinforcements, Order Addressing Repowering Issues and Cost Allocation and Recovery. See also Department of Public Service announcement, “PSC Announces Dunkirk Repowering Agreement,” available at [http://www3.dps.ny.gov/pscweb/WebFileRoom.nsf/web/932BA933DA7BD6BF85257CF500549F5A/\\$File/pr14040.pdf?OpenElement](http://www3.dps.ny.gov/pscweb/WebFileRoom.nsf/web/932BA933DA7BD6BF85257CF500549F5A/$File/pr14040.pdf?OpenElement).

<sup>108</sup> Knauss, Tim. “Cuomo’s deal with Dunkirk Power Plant Unlawfully Costs National Grid ratepayers \$20 million per year, lawsuit claims.” Syracuse Media Group, March 5, 2015, available at [http://www.syracuse.com/business-news/index.ssf/2015/03/cuomos\\_deal\\_with\\_dunkirk\\_power\\_plant\\_unlawfully\\_costs\\_national\\_grid\\_ratepayers\\_2.html](http://www.syracuse.com/business-news/index.ssf/2015/03/cuomos_deal_with_dunkirk_power_plant_unlawfully_costs_national_grid_ratepayers_2.html).

<sup>109</sup> *Entergy Nuclear FitzPatrick, LLC et al v. Audrey Zibelman et al*, United States District Court for the Northern District of New York, Docket No. 5:15-CV-230 [DNH / TWD], filed February 27, 2015, available at [https://www3.dps.ny.gov/W/PSCWeb.nsf/96f0fec0b45a3c6485257688006a701a/37b1738f80fef72c85257e22005f66d3/\\$FILE/20178756.pdf/Complaint.pdf](https://www3.dps.ny.gov/W/PSCWeb.nsf/96f0fec0b45a3c6485257688006a701a/37b1738f80fef72c85257e22005f66d3/$FILE/20178756.pdf/Complaint.pdf).

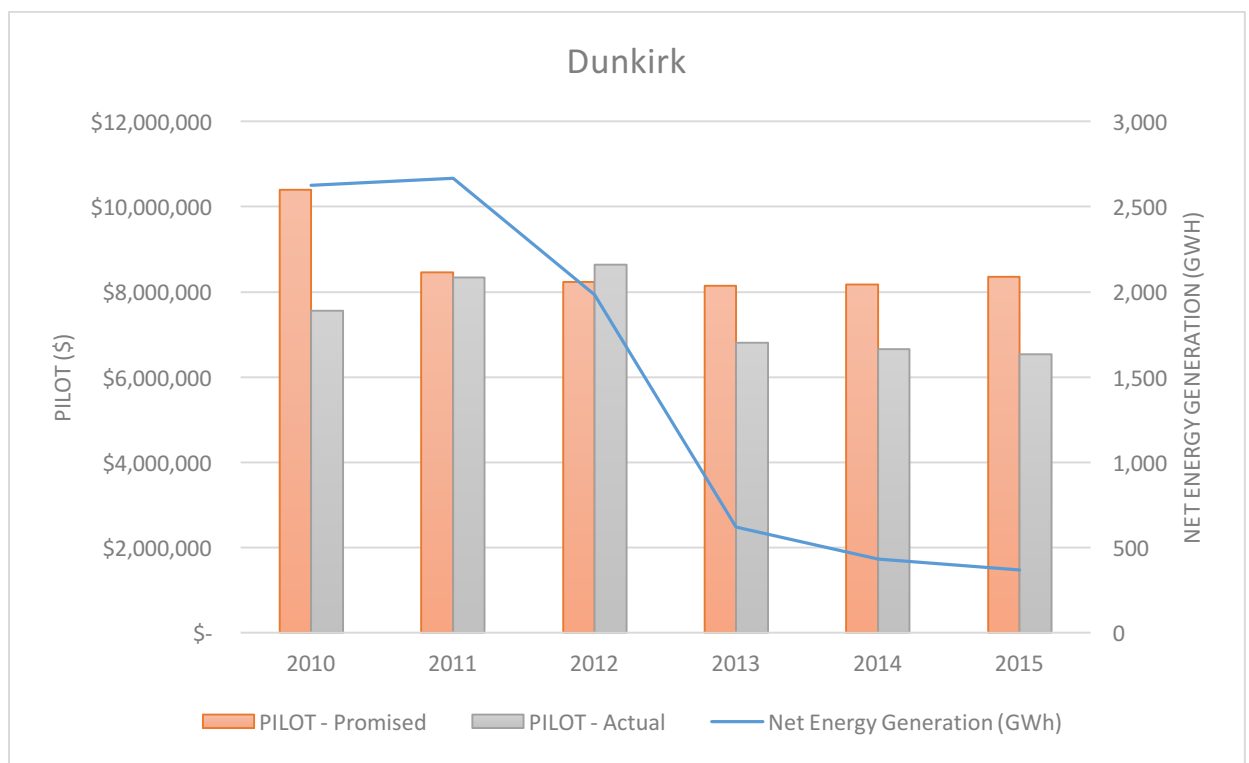
<sup>110</sup> See Knauss, Tim. “Cuomo’s deal with Dunkirk Power Plant Unlawfully Costs National Grid ratepayers \$20 million per year, lawsuit claims.” Syracuse Media Group, March 5, 2015, available at [http://www.syracuse.com/business-news/index.ssf/2015/03/cuomos\\_deal\\_with\\_dunkirk\\_power\\_plant\\_unlawfully\\_costs\\_national\\_grid\\_ratepayers\\_2.html](http://www.syracuse.com/business-news/index.ssf/2015/03/cuomos_deal_with_dunkirk_power_plant_unlawfully_costs_national_grid_ratepayers_2.html).

<sup>111</sup> Knauss, Tim. “Cuomo targets power plant that closed after \$110M subsidy by National Grid customers.” Syracuse Media Group, February 13, 2016, available at [http://www.syracuse.com/news/index.ssf/2016/02/cuomo\\_targets\\_power\\_plant\\_that\\_closed\\_after\\_110m\\_subsidy\\_by\\_national\\_grid\\_custom.html](http://www.syracuse.com/news/index.ssf/2016/02/cuomo_targets_power_plant_that_closed_after_110m_subsidy_by_national_grid_custom.html).

Cuomo issued a letter calling on the Commission to investigate NRG’s decision to not proceed with the refueling.<sup>112</sup>

Despite the plant’s recent struggles, Dunkirk’s annual PILOT payments have been within the agreed-upon range, per the calculation methodology in the Agreement, as show in Figure 3 below.

Figure 3: Dunkirk PILOT Payments.<sup>113</sup>



In light of the plant’s mothballing, however, payments going forward are likely to be reduced by an order of magnitude. In February 2016, NRG submitted a letter of intent to reduce its 2017 payments by 85%, which could represent a combined budget shortfall of \$7,094,331.20

<sup>112</sup> Robinson, David. “Cuomo Seeks PSC Probe of NRG Over Dunkirk Power Plant Shutdown.” The Buffalo News February 10, 2016, available at <http://www.buffalonews.com/business/cuomo-seeks-psc-probe-of-nrg-over-dunkirk-power-plant-shutdown-20160210>.

<sup>113</sup> Extrapolated from actual payments made to City of Dunkirk and assumed the following approximated shares: County - 21.3%, School District - 45.44%, City - 33.22%.

for all three tax jurisdictions.<sup>114</sup> Local officials are concerned with how they will make up for the lost tax dollars, as Dunkirk contributes approximately 18% of the city's and 10% of the school district's budget.<sup>115</sup>

### **2.1.2 Cayuga and Somerset**

The Cayuga coal-fired power plant is a two-unit facility with a net capacity of 306 MW that initiated operations in 1955 and 1956 and is located in Lansing, near Ithaca. The Somerset plant is a 668 MW coal-fired facility located in Barker, New York on the southern shore of Lake Ontario, Niagara County, which began commercial operations in 1984. The plants are wholly-owned subsidiaries of the Riesling Power, LLC, and are operated by the Cayuga Operating Company, LLC and the Somerset Operating Company, LLC, respectively.

Since 2008, the economics of both facilities have been under increasing financial strain as a result of a significant decline in energy market prices in NYISO Zone C for Cayuga and in NYISO Zone A for Somerset. At the same time, both facilities experienced increases in the delivered price for coal.<sup>116</sup> As a result, both Cayuga and Somerset often operated—when they did operate—at a loss, where the cost of generation exceeded the market price of energy for significant portions of the year.

The Cayuga project employed approximately 63 people with payroll and benefits totaling \$47 million annually, and the Somerset project employed 91 people with an annual total of payroll and benefits of \$10 million. Both operators provide annual PILOT payments to their respective communities that comprise a substantial percentage of the municipalities' budgets. For example, Cayuga's combined \$3.3 million PILOT payment to the Town of Lansing, the County of Tomkins, and the Lansing Central School District contributed 10% to the town tax base, 14% to the school tax base, and 2% to the county tax base for the 2011/2012 tax year. At Somerset,

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<sup>114</sup> Cuthbert, Rebecca, Nicole Gugino, and Greg Fox.. "NRG: 85 Percent Cut." Observer Today February 9, 2016, available at <http://www.observertoday.com/page/content.detail/id/623731/NRG--85-percent-cut.html?nav=5047>.

<sup>115</sup> Overton, Thomas. "Replacing Coal in a Small Town." Power Mag August 5, 2013, available at <http://www.powermag.com/replacing-coal-in-a-small-town/>.

<sup>116</sup> Schlissel, David, Cathy Kunkel and Tom Sanzillo, Institute for Energy Economics and Financial Analysis. "A Losing Proposition: Why the Proposal to Repower the Cayuga Plant Should be Rejected," August 2015, available at <http://ieefa.org/wp-content/uploads/2015/08/Losing-Proposition-Why-the-Proposal-to-Repower-the-Cayuga-Plant-Should-Be-Rejected-IEEFA-Aug-2015.pdf> ("IEEFA: Losing Proposition"). Citing SNL Financial data tracking the decline in NYISO Zones A and C and delivered price of coal for the Cayuga and Somerset facilities.



the \$13.7 million PILOT payment in 2012 contributed 80% to the Town of Somerset tax base, 70% to the Barker Central School District tax base, and 5% to the Niagara County tax base.<sup>117</sup> As further described below, Cayuga is likely to be mothballed in 2017, while Somerset will continue operating but with PILOT payments well below the full amount contemplated under the agreement.

The Somerset Operating Company's PILOT Agreement is split between Barker Central School District (59.25%), the Town of Somerset (9.25%), and Niagara County (31.50%).<sup>118</sup> PILOT payments are indexed to the annual average Dark Spread in 2008: if the Dark Spread is greater than or equal to the 2008 annual average Dark Spread, the PILOT payment for the following tax year is \$15,800,000. If the Dark Spread is less than the 2008 annual average, the PILOT payment for the following tax year is a lesser amount.<sup>119</sup> However, the PILOT agreement was negotiated shortly before the plant's previous owner, AES Eastern Energy, filed bankruptcy and the Upstate New York Power Producers (UNYPP) took ownership of Cayuga and Somerset. Ownership transferred hands once more from the UNYPP to Riesling Power in 2016.<sup>120</sup>

Due to the plant's financial situation, the payments in subsequent years decreased drastically, as demonstrated in Figure 4 below. A new agreement was negotiated between the NCIDA and Somerset (approved by the IDA Board of Directors) in February 2016 for two years, to be transferred to the plant's new owner, Riesling Power, with a \$4.62 million payment in 2017, and \$4.12 million in 2018.<sup>121</sup> As seen in Figure 4 below, the three municipalities receiving PILOT payments from Somerset face a significant challenge to fill the budget gap.

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<sup>117</sup> See Upstate New York Power Producers. "Response to New York Energy Highway Request for Information," available at <http://www.nyenergyhighway.com/Content/documents/44.pdf>.

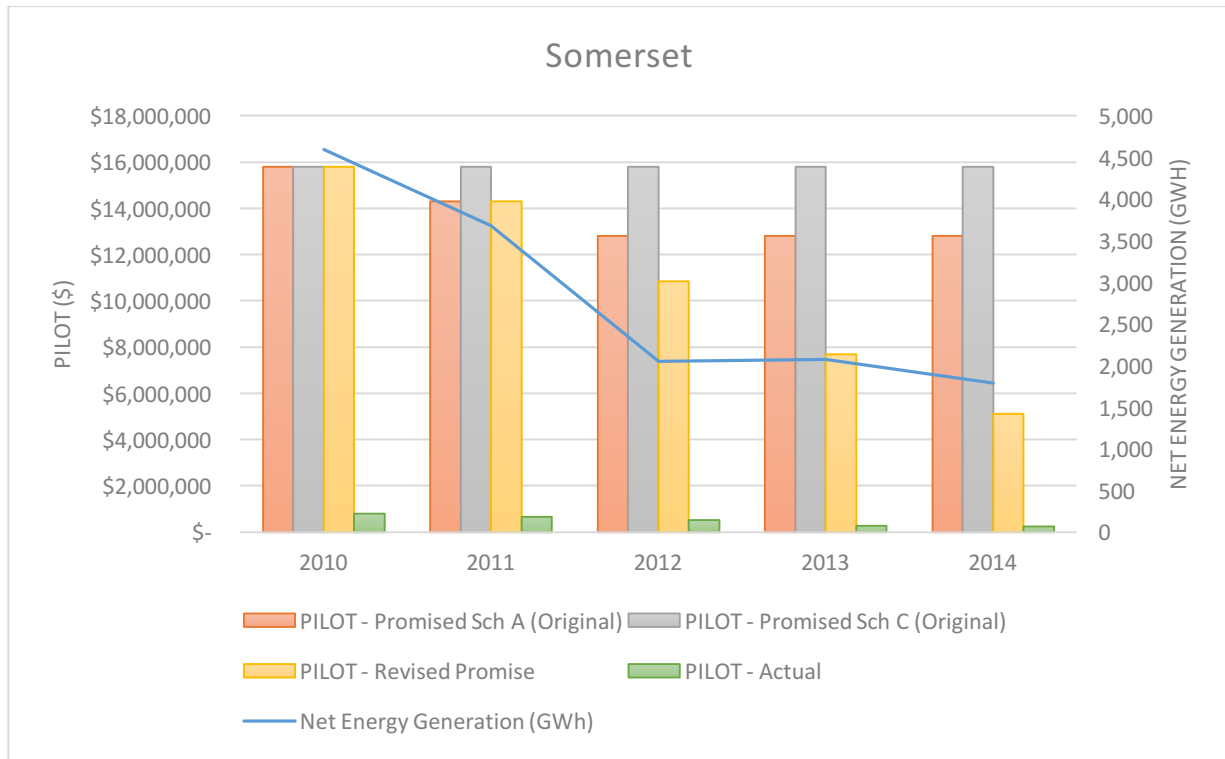
<sup>118</sup> Somerset PILOT Agreement, Schedules A and C.

<sup>119</sup> Somerset PILOT Agreement, Section 2(C).

<sup>120</sup> Lockport Union-Sun & Journal Staff Report, "Somerset PILOT Reduction Approved." February 12, 2016, available at [http://www.lockportjournal.com/news/local\\_news/somerset-pilot-reduction-approved/article\\_95dd6434-be72-5a3e-93fe-626ba11e3f08.html](http://www.lockportjournal.com/news/local_news/somerset-pilot-reduction-approved/article_95dd6434-be72-5a3e-93fe-626ba11e3f08.html). See also Casler, Andrew. "Denied: Cayuga Power Plant Retrofit," February 23, 2016, available at <http://www.ithacajournal.com/story/news/local/2016/02/23/denied-cayuga-power-plant-retrofitting/80807300/>.

<sup>121</sup> Lockport Union-Sun & Journal Staff Report. "Somerset PILOT Reduction Approved." February 12, 2016, available at [http://www.lockportjournal.com/news/local\\_news/somerset-pilot-reduction-approved/article\\_95dd6434-be72-5a3e-93fe-626ba11e3f08.html](http://www.lockportjournal.com/news/local_news/somerset-pilot-reduction-approved/article_95dd6434-be72-5a3e-93fe-626ba11e3f08.html).

Figure 4: Somerset PILOT Payments.<sup>122</sup>



Unlike Somerset, the Cayuga Operating Company’s PILOT Agreement with the aforementioned jurisdictions is indexed to generation and operating costs. Cayuga is required to pay an amount equal to the real property taxes it would otherwise have had to pay (its Taxable Value),<sup>123</sup> multiplied by the current tax rates for each taxing jurisdiction.<sup>124</sup> In addition, if the Company’s Net Operating Income exceeds the \$14 million threshold set forth in the Agreement, the Company must make an additional payment.<sup>125</sup>

<sup>122</sup> “Promised Sch. A” and “Promised Sch. C” represent the differences in estimated agreed-upon PILOT payments based on the average annual Dark Spread as compared to the 2008 Dark Spread.

<sup>123</sup> Cayuga PILOT Agreement, Par. 1(b).

<sup>124</sup> Cayuga PILOT Agreement, Rider, Article 1.1. The Taxable Value is negotiated and calculated based on “three years of historic data and one year of projected data” for cash inflows (energy and capacity), cash outflows (fuel and transportation costs, variable and fixed costs, management fees, and capital expenditures), and “indicated value” (net cash flow divided by a negotiated capitalization rate, the calculation for which is spelled out in the agreement). Cayuga PILOT Agreement, Rider, Exhibit B.

<sup>125</sup> Cayuga PILOT Agreement, Rider, Article 1.2.

The Cayuga Operating Company's PILOT Agreement provides for an Annual Status Review each June, unless either party has served a Modification Notice, to review the principles of the PILOT and "discuss the current economic environment and operations of the Project."<sup>126</sup> If either the Company or the Niagara County IDA seeks a downward or upward adjustment in valuation, respectively, they must notify the other party and provide supporting information.<sup>127</sup>

Despite the economic value to their respective communities, the Cayuga Operating Company filed notice with the New York Public Service Commission in July 2012 that it intended to mothball the two-unit facility.<sup>128</sup> In September 2012, the Commission determined that the Cayuga units were needed for transmission system reliability and directed the parties to file either an agreement or proposed terms for consideration by the Commission to address the adverse effects of retirement on reliability. After the study, New York State Electric and Gas, Inc. (NYSEG), in whose service territory Cayuga is located, proposed upgrades to transmission substations in the area to eliminate thermal overload and satisfy capacity and voltage requirements.<sup>129</sup> Cayuga and NYSEG then entered into a RSSA, which was subsequently extended through June 30, 2017.<sup>130</sup> Analysts concluded that ratepayers would have to pay approximately \$120 million under the terms of both RSSA's for all fixed charges and capital expenditures, net all capital refunds and capacity, net energy, and ancillary services revenue offsets.<sup>131</sup> Opponents to the arrangement argued that the continued subsidization of the Cayuga

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<sup>126</sup> Cayuga PILOT Agreement, Rider, Article 5.2.

<sup>127</sup> *Id.*

<sup>128</sup> Case 12-E-0400, Petition of Cayuga Operating Company, LLC to Mothball Generating Units 1 and 2.

<sup>129</sup> Cassell, Barry. "Reliability issues raised over pending mothballing of Cayuga coal units," Transmission Hug, September 28, 2012, available at <http://www.transmissionhub.com/articles/2012/09/reliability-issues-raised-over-pending-mothballing-of-cayuga-coal-units.html>.

<sup>130</sup> Cayuga also filed an unexecuted RMR agreement with the Commission on November 16, 2012, under which Cayuga would provide RMR service to NYSEG. Following approval of the RSSA, Cayuga withdrew its Federal Power Act Section 205 RMR filing as moot. See Cayuga Expedited Motion to Hold Proceeding in Abeyance, Docket No. ER13-405-000, at 2 filed (December 31, 2012); Cayuga Expedited Motion to Withdraw Filing, Docket No. ER13-405-000 at 3 (filed Feb. 28, 2013).

<sup>131</sup> Schlissel, David, Cathy Kunkel and Tom Sanzillo, Institute for Energy Economics and Financial Analysis. "A Losing Proposition: Why the Proposal to Repower the Cayuga Plant Should be Rejected," at 6, August 2015.

facility by NYSEG ratepayers would not result in any permanent solution or provide any energy or capacity market savings for NYSEG or its ratepayers.<sup>132</sup>

Simultaneously, the Commission directed NYSEG to evaluate the potential of repowering the plant as a natural gas facility, and Cayuga filed four repowering proposals.<sup>133</sup> For Tompkins County, the proposals provided a number of community opportunities and benefits. Repowering would enable Tompkins County to keep permanent high tech jobs in the community, create up to 563 construction jobs and 90 permanent jobs, retain a significant property tax base, and add approximately \$1 million dollars to the local economy annually through locally purchased goods and services, maintenance work and capital improvements.<sup>134</sup>

The Commission ultimately found that repowering using ratepayer funds was not in the public interest but that Cayuga could seek to re-power “on a merchant basis.”<sup>135</sup> On the same day, the Commission also authorized the sale of the Cayuga and Somerset Coal Plants to Riesling Power, LLC, an independent power producer affiliated with the Blackstone Group.<sup>136</sup> The new owners of the facility have advised the Commission that all plant-level personnel at the Somerset and Cayuga facilities will remain in place after the sale.<sup>137</sup>

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<sup>132</sup> *Id.*

<sup>133</sup> Case 12-E-0557, Proceeding on Motion of the Commission to Examine Repowering Alternatives to Utility Transmission Reinforcements. The four options included (1) Repower the two existing coal-fired boilers with natural gas; (2) Construct three new gas-fired units, in a simple cycle configuration; (3) construct one new gas-fired unit, in a combined-cycle configuration using one of the existing steam turbine generators and repower one of the existing coal-fired units with natural gas and 4) construct two new gas fired units in a combined cycle configuration. See Cayuga Repowering Proposal, Discussion before the Tompkins County Legislature Economic Development Committee, April 4, 2013, *available at* [tomkinscountyny.iqm2.com/Citizens/FileOpen.aspx?Type=1&ID=2021](http://tomkinscountyny.iqm2.com/Citizens/FileOpen.aspx?Type=1&ID=2021).

<sup>134</sup> Cayuga Repowering Proposal, Discussion before the Tompkins County Legislature Economic Development Committee, April 4, 2013 *available at* [tomkinscountyny.iqm2.com/Citizens/FileOpen.aspx?Type=1&ID=2021](http://tomkinscountyny.iqm2.com/Citizens/FileOpen.aspx?Type=1&ID=2021).

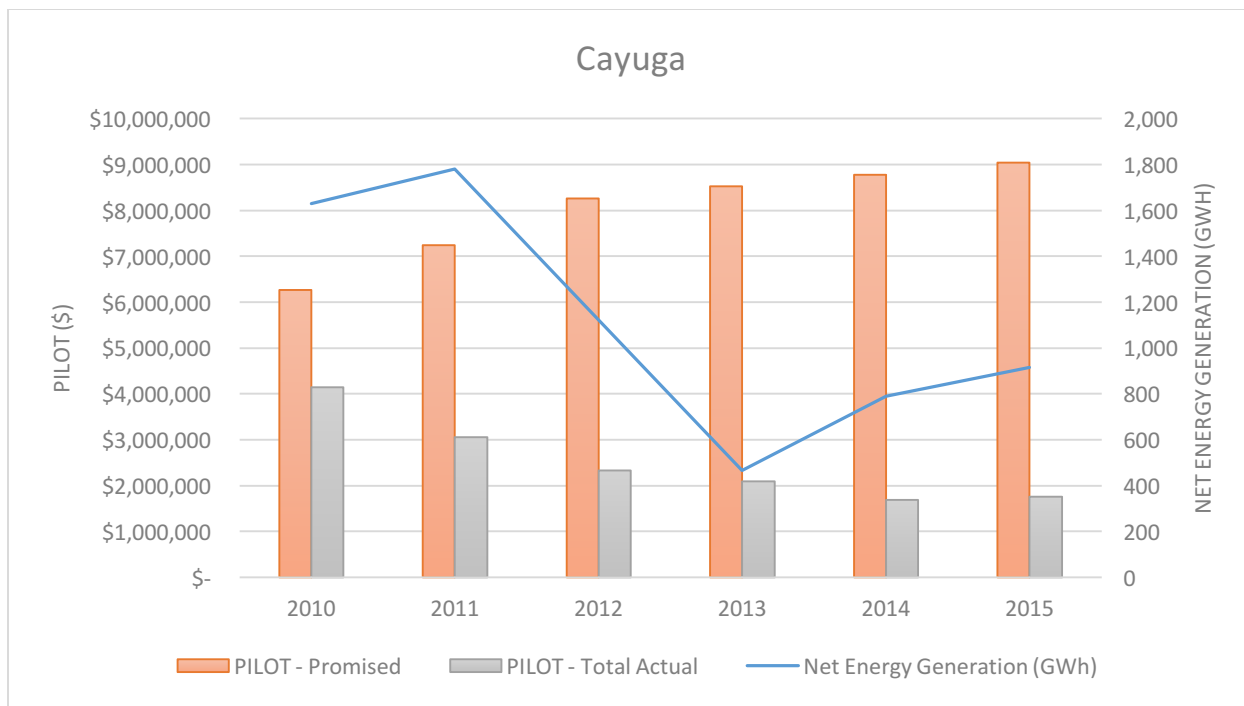
<sup>135</sup> Case 12-E-0557. Order Making Findings on the Repowering of the Cayuga Generating Facility, p. 4. February 25, 2016.

<sup>136</sup> Case 15-E-0580. Joint Petition of Upstate New York Power Producers, Inc.; Cayuga Operating Company, LLC; Somerset Operating Company, LLC; and Riesling Power LLC for Expedited Approval Pursuant to Section 70 of the New York State Public Service Law and Related Approvals. Order Approving Transfer, issued February 25, 2016.

<sup>137</sup> Casler, Andrew. “Denied: Cayuga Power Plant Retrofit,” February 23, 2016, *available at* <http://www.ithacajournal.com/story/news/local/2016/02/23/denied-cayuga-power-plant-retrofitting/80807300/>.

In sum, unless there is another RSSA extension or Cayuga repowers to natural gas on a merchant basis, both units will be mothballed in 2017. Notably, Cayuga’s payments under its PILOT agreement have been below the anticipated amount, as demonstrated in Figure 5 below.

Figure 5: Cayuga PILOT Payments.<sup>138</sup>



### 2.1.3 Huntley

The Huntley Generating Station (Huntley), located in Tonawanda, New York, is emblematic of how an aging coal-fired power plant with over a decade of declining generation and PILOT payments has impacted the workforce, the school district, and local government budgets.

When Huntley entered into commercial operations between 1942 and 1958, the facility consisted of 6 coal-fired units. In 2005, 180 MW of generation retired, followed by another 200

<sup>138</sup> Extrapolated from actual payments made to Town of Lansing, and assuming the following share: Tomkins County - 23%, Lansing Central School District - 69%, Town of Lansing - 5%, and other - 3%.

MW in 2007. The remaining two units announced retirement in 2016.<sup>139</sup> The Commission has not yet issued a decision.

The New York State Department of Public Service requested that National Grid and NYISO perform a reliability analysis on the reliability impacts of retiring Huntley and mothballing Dunkirk, based on three study scenarios.<sup>140</sup> NYISO ultimately concluded that bulk power reliability can be maintained if both Huntley and Dunkirk shut down.<sup>141</sup> National Grid confirmed that neither the Huntley nor Dunkirk plant must be retained as Reliability Must Run (RMR) generators in order to satisfy reliability or local transmission planning criteria.<sup>142</sup>

In October 2015, Huntley Power, LLC also filed a RMR service request to FERC to keep the last remaining units operating. In its submission, Huntley Power reported that the plant had a gross margin (*i.e.*, total revenues less variable cost) of just \$16.4 million for the 12-month period ending July 31, 2015, compared to a total service cost of approximately \$80.3 million. The \$16.4 million gross margin was insufficient to cover anything more than 60 percent of the plant's fixed operations and maintenance (O&M) expenses "let alone any other component of the cost of service."<sup>143</sup> As such, Huntley Units 67 and 68 were retired as of March 1, 2016.

Under its PILOT Agreement, Huntley's payments are split between the Town of Tonawanda, Erie County, and the Kenmore-Town of Tonawanda Union Free School District, in proportions based on their respective shares of the tax rate for the prior assessment year.<sup>144</sup> The municipalities have seen a reduction in PILOT payments over the years, as shown in Figure 5 below.

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<sup>139</sup> Case No. 15-E-0505. Petition of Huntley Power, LLC to Retire Generating Units 67 and 68, filed August 25, 2015.

<sup>140</sup> Case No. 15-E-0505. DPS Staff Letter dated August 28, 2015, Huntley - National Grid NYISO Reliability Analysis Request.

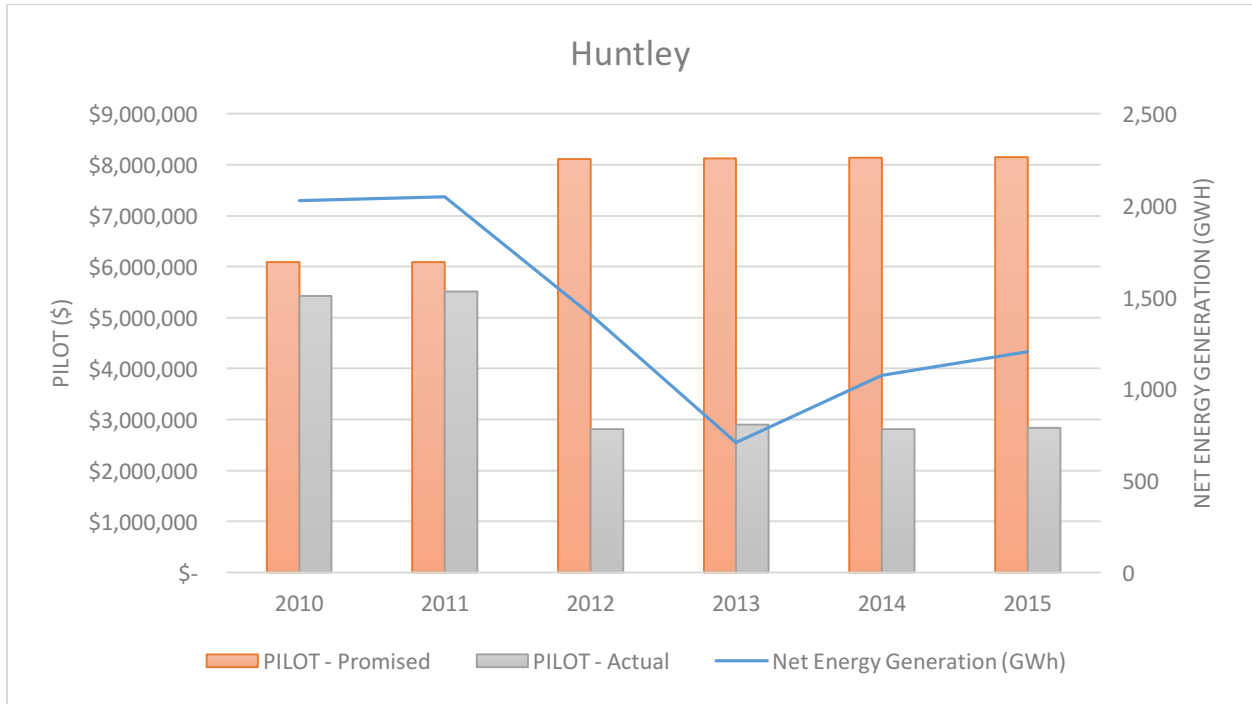
<sup>141</sup> Case No. 15-E-0505. Letter dated December 11, 2015.

<sup>142</sup> Case No. 15-E-0505. Letter dated December 16, 2015.

<sup>143</sup> Letter from Richard Dewey, Exec. VP, NYISO, to Raj Addepalli, Managing Director, Utility Rates and Service, New York Dep't of Public Service October 30, 2015, available at [http://www.nyiso.com/public/webdocs/markets\\_operations/documents/Legal\\_and\\_Regulatory/NY\\_PSC\\_Filings/2015/NYISO\\_PSC\\_letter\\_Huntley\\_2015-10-30\\_clean.pdf](http://www.nyiso.com/public/webdocs/markets_operations/documents/Legal_and_Regulatory/NY_PSC_Filings/2015/NYISO_PSC_letter_Huntley_2015-10-30_clean.pdf).

<sup>144</sup> Huntley PILOT Agreement, Section 4(a).

Figure 5: Huntley PILOT Payments.



To date, local organizations in Tonawanda have joined forces to build a strategic alliance, the Just Transition Coalition, that includes teachers, union representatives, and community organizers to convene and share resources to prioritize the needs of working people and their families. The Just Transition Coalition formed as reductions in energy production at the Huntley coal-fired power plant created deficits in local budgets and in turn led to reductions to essential municipal services.<sup>145</sup> As generation declined, workforce at the plant was reduced from 125 jobs down to 79 jobs, and the Kenmore-Tonawanda School District (Ken-Ton) school district budget was cut. Three schools were closed and 135 school district employees lost their jobs.<sup>146</sup>

The Kenmore-Tonawanda Teachers Association (KTA) reached out to the Western New York Area Labor Federation (WNYALF) for assistance. In the fall of 2013, a meeting was held with the KTA, United Steelworkers, the International Brotherhood of Electrical Workers, the

<sup>145</sup> Clean Air Coalition. “Join Us At A Just Transition Assembly” February 5, 2014, available at <https://www.cacwny.org/2014/02/join-us-at-a-just-transition-assembly/>.

<sup>146</sup> Pignataro, T.J. “Tonawanda Braces for End of Huntley Era.” The Buffalo News, August 25, 2015, available at <http://www.buffalonews.com/city-region/tonawanda-braces-for-end-of-huntley-era-20150825>.

Clean Air Coalition and the Western New York Sierra Club at the behest of the WNYALF. The coalition has balanced between concerns over environmental impacts of continued operations (and pressures to close the plant), and championing security for the jobs and livelihoods of the families that depend upon the facility for employment and PILOT contributions—in other words, building a successful coalition around the transition requires a great deal of tactical and strategic sensitivity. With the retirement of Huntley’s Units 1 and 2, the Just Transition Coalition has continued to push for temporary funding to support municipal services and Huntley workers and to remediate the site.<sup>147</sup>

## **2.2 Summary of Findings**

A review of the PILOT agreements described above demonstrates that, in most cases, payments are not fixed for the duration of the agreement, but vary based on the generator’s financials, which, in turn, are based on the costs of operations, the facility’s taxable status or net generation, or some combination thereof. Consequently, as generation begins to decline and facilities begin to retire or mothball generating units, annual PILOT payments may decrease and become substantially less than what was anticipated under the “good” operating conditions assumed under the PILOT agreements. In addition, in many instances, payments in the final years of the useful life of the plant are negotiated downward even further. Indexing payments to annual net generation, or some other measure of the plant’s economic well-being, is reasonable, but can clearly pose significant problems for the taxing jurisdictions.

In addition, several of the plants have retired or mothballed their generating units, yet some of the PILOT agreements expire years from now, leaving the impacted municipalities to account for significant lost revenue over a long period of time. This is especially problematic when municipalities rely on the PILOT payments for a large percentage of their budgets, such as the Town of Somerset, 80% of whose budget is based on the PILOT agreement with the Somerset Operating Company.

Each of the New York plants and impacted jurisdictions described above represent a unique set of circumstances, challenges, and opportunities. There is no “one size fits all”

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<sup>147</sup> Clean Air Coalition. “Closing of Huntley Plant Can Mean New Story,” September 21, 2015 available at <https://www.cacwny.org/2015/09/closing-of-huntley-plant-can-mean-new-story/>.



transition solution to fill the communities' budget gaps and support displaced workers. Section Three below describes several support mechanisms that may, individually or in combination, provide the necessary financial and workforce assistance to keep the communities whole.

### **3. Support Mechanisms Potentially Available to New York Communities Facing Partial or Full Retirement of Coal Generator Facilities: Economic Engagement and State and Federal Programs**

The transition of a facility from the point of announced closure to fully viable repurposed use requires multiple stakeholders for the study, decommissioning, planning, and redevelopment of the site. The decommissioning process, typically initiated as a business decision by the facility owner and with terms negotiated with local officials, will address the notifications to regulatory officials, assessment of asset value, deconstruction, remediation and abatement of the facility's site.<sup>148</sup> As demonstrated in the case studies of the Potomac River Station redevelopment project and the pending redevelopment of the Fisk and Crawford sites in Section 1.3 above, facility sites are more likely to attract private developers to repurpose the site with the support of local governments.<sup>149</sup> Support may take the form of convening task forces with stakeholders, directing or matching funds through loan and grant programs, providing technical expertise for economic planning to integrate the site into existing economic development schemes, tax incentives to developers, and assistance with re-zoning.<sup>150</sup>

A comprehensive transition strategy must take into account not only the brick-and-mortar challenges of remediating the physical plant site but also address the accompanying fiscal, economic and social challenges communities now face. State and local development of transition schemes must address the unique social challenges that closing the largest contributor to the local tax base poses to the community. The lessons of post-industrialization closures of the 1970's and 1980's illustrated that the communities that lost the primary employer were more likely to suffer increased incidents of physical and mental illness and, in turn, an increased demand for local social services.<sup>151</sup> The loss of PILOT payments due to reduced electricity generation at the plants

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<sup>148</sup> Malley, Ed. "RE POWER Initiative," TRC Presentation, July 2012 available at [http://www.slideshare.net/trc\\_companies/compliance-with-the-clean-air-act-remove-retrofit-or-replace](http://www.slideshare.net/trc_companies/compliance-with-the-clean-air-act-remove-retrofit-or-replace).

<sup>149</sup> See American Clean Skies Foundation (ACSF), "Repurposing Legacy Power Plants: Lessons for the Future", August 2011 available at [http://www.potomacrivergreen.org/wp-content/uploads/2016/01/ACSF\\_layout\\_coverANDtext.pdf](http://www.potomacrivergreen.org/wp-content/uploads/2016/01/ACSF_layout_coverANDtext.pdf); Also see Delta Institute. "Final Report: Fisk and Crawford Generating Station Sties, Chicago, Illinois," October 2012 available at [http://delta-institute.org/delta/wp-content/uploads/Fisk\\_Crawford\\_Reuse\\_Task\\_Force\\_Sept-2012.pdf](http://delta-institute.org/delta/wp-content/uploads/Fisk_Crawford_Reuse_Task_Force_Sept-2012.pdf).

<sup>150</sup> *Id.*

<sup>151</sup> McKenzie, Richard B. "Fugitive Industry: The Economics and Politics of Deindustrialization." *Pacific Institute for Public Policy Research* (1984). 3. Print.

translated to teacher and school district staff layoffs, school closings and consolidations. The shifting economic landscape must also be addressed by ensuring labor support through retraining and foster workforce development schemes that prepare the existing and future workforce to meet the realities of a transforming local economy.

The process for a comprehensive transition strategy that includes brownfield, social, fiscal, and economic redevelopment may take a decade, if not longer. At each phase of the process, there are opportunities to provide fiscal support to the local governments that have lost PILOT and associated tax payments that supported school districts and other essential services. There are opportunities to ensure that worker re-training initiatives are linked to existing local and regional economic development initiatives. As the case studies in Section One illustrate, early intervention by community organizations and redevelopment agencies that leverage existing planning initiatives and relationships with local institutions of higher learning are best positioned to avail themselves of the state and federal grant and loan programs specifically designed to support each stage of the transition process.

### **3.1 New York State Support Mechanisms**

New York has a long history of economic development projects initiated by local governments that have combined a number of grant programs to remediate and revitalize industrial sites. State support mechanisms include tax incentives, grants, a mitigation fund for communities in transition, and workforce development efforts that can tie into New York State's growing clean energy economy.

#### **3.1.1 The New York State Fossil Fuel Plant Closure Fund**

One of the most significant state initiatives is the mitigation fund established by the Legislature to assist communities impacted by coal-fired power plants that are shut down. In the spring of 2015, the New York State Legislature passed a bill creating a fund to support municipal corporations and school districts located in areas where a fossil fuel-fired electric generator has permanently closed operations and reduced the tax or PILOT payments to those impacted jurisdictions by 20% or more. The fund is administered by New York's Urban

Development Corporation and is capped at \$19 million and made available to the municipal corporations or school districts for a period of no more than five years.<sup>152</sup>

Governor Cuomo’s 2016 budget bill included allocations for the fund and committed to “working with plant owners and host communities to achieve [the Governor’s objective of closing New York’s remaining coal-fired plants] in a manner that will preserve jobs or retrain current employees for new jobs in New York’s clean energy economy and provide tax revenue stabilization assistance to local governments and school districts.”<sup>153</sup> The fund could provide: (1) money for the affected communities so that ordinary working people would not be on the hook for the shut down of the plant, 2) job and/or retraining for those employed at the plant, and 3) pathways to reuse the physical plant, and the site of the plant, for various activities that would enhance the economic and cultural life of the communities.

The Just Transition Coalition, described in Section Two above, is advocating for the fund to be made available to the Town of Tonawanda, Erie County, and the Kenmore-Tonawanda School District to offset the impact of the Huntley plant closure.<sup>154</sup>

### **3.1.2 New York State Brownfield Cleanup Program**

The New York State Brownfield Cleanup Program (BCP), administered by the Department of Environmental Conservation (DEC), encourages private-sector cleanup of brownfields by providing tax credits and reduces the financial burden on the State’s Superfund program. The BCP can assist communities impacted by coal plant closures by removing the barriers to the redevelopment of retired generation facility sites. For such communities to fully avail themselves of the funding, New York can and should ensure that transition sites are given priority under the new regulations and that there is sufficient DEC staff to oversee the applications and projects.

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<sup>152</sup> 2015 Sess. Law News of N.Y. Ch. 20 (S. 6012) (McKinney’s), Part C, Subpart H.

<sup>153</sup> New York State. “Building a Smarter, Stronger and Fairer New York,” 2016 available at <https://www.ny.gov/2016-state-state-and-budget-address/building-smarter-stronger-and-fairer-new-york>.

<sup>154</sup> Popiolkowski, Joseph. “Cuomo Budget Proposal Could Cushion Tax Impact of Huntley Closing,” The Buffalo News, January 15, 2016, <http://www.buffalonews.com/city-region/town-of-tonawanda/cuomo-budget-proposal-could-cushion-tax-impact-of-huntley-closing-20160115>.

Brownfields are defined as “real property where a contaminant is present at levels exceeding the soil cleanup objectives or other health-based or environmental standards, criteria or guidance adopted by DEC that are applicable based on the reasonably anticipated use of the property.”<sup>155</sup> Two types of tax credits are available to private redevelopers of brownfield sites: (1) a Site Preparation Credit of up to 50% for the investigation or remediation of the site or qualification for a certificate of completion and (2) the Tangible Property (Redevelopment) Credit, which gives qualifying sites a baseline credit of 10%, plus an additional 5% each for the following:

1. At least 50% of the site is located in a zone with a high poverty and unemployment rate;
2. For performing unrestricted soil and groundwater cleanup;
3. If the site conforms with the goals and priorities of the designated Brownfield Opportunity Area in which it is located, as further described below;
4. If redevelopment includes affordable housing; or
5. If redevelopment includes manufacturing.<sup>156</sup>

In 2015, the program was extended for ten years, and participating sites have until March 31, 2026, to receive a certificate of completion.<sup>157</sup>

### **3.1.3 New York State Department of State Brownfield Opportunity Areas Program**

The New York State Department of State, Office of Planning and Development administers the Brownfield Opportunity Area (BOA) Program, which provides communities with grants to assist in planning for the revitalization of areas that are experiencing economic

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<sup>155</sup> New York State Department of Environmental Conservation, Brownfield Cleanup Program, available at <http://www.dec.ny.gov/chemical/8450.html>.

<sup>156</sup> The maximum Tangible Property Credit available is 24%. New York State Department of Department of Environmental Conservation, Brownfield Cleanup Program, available at <http://www.dec.ny.gov/chemical/8450.html>. The DEC is in the process of developing new rules for the BCP program. See Department of Environmental Conservation, Environmental Remediation - Brownfield Cleanup Program - Revised Proposed Regulations, available at <http://www.dec.ny.gov/regulations/101908.html>.

<sup>157</sup> New York State Department of Environmental Conservation, Environmental Remediation - Brownfield Cleanup Program - Revised Proposed Regulations, available at <http://www.dec.ny.gov/regulations/101908.html>.

distress or in which brownfields are located. The program was established in 2003 and is available to a wide variety of areas, including residential, downtown, commercial, industrial, and waterfront areas.<sup>158</sup> The BOA differs from the Brownfield Cleanup Program in that it is intended to provide communities assistance with planning remediation and redevelopment via grants, while the BCP offers tax incentives to encourage the remediation work itself. The two programs are interrelated—a site that participates in the BOA can get “enhanced tax credits” under the BCP Program if it is eligible.<sup>159</sup>

Eligible entities include municipalities, 501(c)(3) organizations that meet certain criteria, and New York City Community Boards.<sup>160</sup> Funding preference is given to areas that meet one or more of the following characteristics:

- “Areas with concentrations of brownfield sites.
- Areas with brownfield sites presenting strategic opportunities to stimulate economic development, community revitalization or to site new public amenities.
- Areas with indicators of economic distress including low resident incomes, high unemployment, high commercial vacancy rates and depressed property values.
- Established partnerships or expressed support between municipalities and community based organizations to pursue an area-wide plan.”<sup>161</sup>

The BOA Program process involves a preliminary assessment of the site and its potential for revitalization, an in-depth “nomination” process that evaluates the site’s assets and relevant economic and market trends to determine potential for reuse, and the development of an Implementation Strategy that lays out a range of activities to redevelop or revitalize the site. Finally, the municipality or community organization must submit the Nomination and

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<sup>158</sup> New York State Department of State, Office of Planning and Development, BOA Program Details, available at <http://www.dos.ny.gov/opd/programs/brownFieldOpp/boaprogramdetails.html>.

<sup>159</sup> New York State Department of State, Office of Planning and Development, Brownfield Redevelopment: Primary Benefits of BOA Program Participation, available at <http://www.dos.ny.gov/opd/programs/brownFieldOpp/boaprogrambenefits.html>.

<sup>160</sup> Eligible municipal entities include “cities, villages, towns, counties, local public authorities or public benefit organizations, special improvement districts, and Indian nations or tribes.” New York State Department of State, Office of Planning and Development, BOA Program Details, available at <http://www.dos.ny.gov/opd/programs/brownFieldOpp/boaprogramdetails.html>.

<sup>161</sup> *Id.*

Implementation Strategy to the New York Secretary of State for review.<sup>162</sup> The types of activities and investments that a BOA Plan can encompass include, but are not limited to, site inventory and infrastructure studies, community visioning to set goals and objectives, consideration of design standards for future buildings and streetscapes, and revisions to local zoning and other laws to ensure the BOA Plan can move forward.<sup>163</sup>

Communities and property owners that participate in the program have access to a number of resources, including funding for environmental assessments, so long as the property owner is not responsible for any environmental conditions on site, and the potential to receive a five percent tax credit bonus<sup>164</sup> under the Brownfield Cleanup Program if the site qualifies for the BCP.<sup>165</sup>

### **3.1.4 New York State Tax Increment Financing**

New York has a number of tax incentive mechanisms to attract private developers to transition sites for economic development. Tax increment financing (TIF) is a public finance borrowing method whereby a city designates a special district for redevelopment with the expectation that property values rise because of the improvements and that the property tax generated by improvement will produce sufficient revenue to pay the debt service. The TIF bonds are not secured by the city or state and do not count against a city's debt limit. Many states, including New York,<sup>166</sup> have used TIF's as a tool to fight urban blight.

In 2012, New York passed a change to the law applicable to tax increment financing, Article 18-C of the General Municipal Law of New York (the Municipal Redevelopment Law),

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<sup>162</sup> New York State Department of State, Office of Planning and Development, BOA Program Summary, available at <http://www.dos.ny.gov/opd/programs/brownFieldOpp/boasummary.html>.

<sup>163</sup> New York State Department of State, Office of Planning and Development, Brownfield Redevelopment: Eligible Program Activities, available at <http://www.dos.ny.gov/opd/programs/brownFieldOpp/eligibleactivities.html>.

<sup>164</sup> The tax credit bonus was increased from 2% to 5% through amendments to the Brownfields Cleanup Program in 2015. New York State Department of Environmental Conservation, 2015 Enacted Budget Brownfield Cleanup Program Reforms, available at <http://www.dec.ny.gov/chemical/101350.html>.

<sup>165</sup> New York State Department of State, Office of Planning and Development, Brownfield Redevelopment: Primary Benefits of BOA Program Participation, available at <http://www.dos.ny.gov/opd/programs/brownFieldOpp/boaprogbenefits.html>.

<sup>166</sup> Buffalo Niagara Partnership, "Tax Increment Financing," available at <http://www.thepartnership.org/the-partnership/links-resources/tax-increment-financing/>.

and allowed school district taxes to be allocated toward the payment of debt service on redevelopment projects. By allowing school districts to opt into the allocation of taxes toward these projects, TIF's are a potentially more useful tool in the economic development toolbox, particularly given the fact that school taxes typically account for a significant portion of real property tax burden in a locality.<sup>167</sup>

Potential problems with deploying TIF include revenue shortfalls where revenue projections are overstated, cost spillovers from the TIF district to other tax entities that incur costs due to development, and inefficient distribution of development.<sup>168</sup> Other critics argue that the approach is unduly burdensome to taxpayers because a project will avoid tax payments for decades while the public pays for the costs of road, sewers and schools accompanying the economic growth. There are a number of potential legal and practical issues associated with expanding the TIF statutes to school districts, including concerns that the provisions may conflict with the state constitution and the municipal redevelopment law.<sup>169</sup> Given concerns about the constitutional limits to utilizing TIF's in New York, a feasibility study will be necessary to conduct a thorough tax analysis about the appropriateness of implementing these tax incentives.

### **3.1.5 Workforce Development Opportunities Under REV and RGGI**

New York is currently engaged in planning and developing the most effective approach to integrating renewables into the grid. Efforts to achieve the goals under the Reforming the Energy Vision (REV) proceeding<sup>170</sup> and New York's participation in RGGI not only provide a roadmap for how and what resources will be available within the NYISO, but also signals the new workforce opportunities necessary to meet the policy goals under RGGI and REV. Workforce training programs in communities facing the full or partial retirement or mothballing of coal-fired generators could be geared toward meeting these public policy and investment goals.

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<sup>167</sup> Andreucci, Christopher A. and Patrick M. Malgieri, "2012 State Budget Expands the Reach of Tax Increment Financing," NY Muni Blog, April 5, 2012, available at <http://www.nymuniblog.com/2012-state-budget-expands-the-reach-of-tax-increment-financing/>.

<sup>168</sup> *Id.*

<sup>169</sup> *Id.*

<sup>170</sup> Case 14-M-0101. Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision.



For example, through the Buffalo Billions project, \$750 million from a combination of funding sources is being invested in a solar panel factory that will eventually be leased by SolarCity. The factory is being constructed in South Buffalo at the site of a former, now demolished, steel facility<sup>171</sup> and could simultaneously provide local jobs and contribute toward New York State's clean energy goals. In addition, a recent study conducted by Synapse Energy Economics modeled the impact of six emission reduction measures under RGGI on the industrial, buildings, electric, and transport sectors. The measures included electric vehicles, heat pumps, electric and gas energy efficiency, and wind and solar energy.<sup>172</sup> The study found that all six measures resulted in a net benefit to society when taking into account the value of avoiding climate change, including workforce benefits.<sup>173</sup> In addition to producing energy savings to customers across the participating RGGI states, the measures were also shown to produce workforce benefits. For example, a 40 percent emission reduction scenario could create 58,400 jobs per year on average from 2016 through 2030, which could include direct employment of workers as contractors, construction workers, plant operators and automobile manufacturers. As an indirect benefit, workers could spend their paychecks locally on restaurants, car repairs, and countless consumers goods and services that would benefit the communities.<sup>174</sup>

New York has already begun to make substantial investments in achieving its short-term goal to reduce its greenhouse gas emission by 40 percent below 1990 levels by 2030, and its longer-term goal of reducing emissions by 80 percent by 2050.<sup>175</sup> Workforce training programs can both assist communities impacted by plant closures and provide the opportunity to align the

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<sup>171</sup> Rose, Joel. "New York Banks On A Solar Factory To Ignite Buffalo's Economy," National Public Radio, December 1, 2015 available at <http://www.npr.org/2015/12/01/458006877/new-york-banks-on-a-solar-factory-to-ignite-buffalo-s-economy>.

<sup>172</sup> Stanton, Elizabeth, *et al.* "The RGGI Opportunity," Synapse Energy Economics, Inc., February 5, 2016, Table 2, available at <http://www.synapse-energy.com/sites/default/files/The-RGGI-Opportunity.pdf>.

<sup>173</sup> *Id.*

<sup>174</sup> *Id.* at Appendix D. Analysts estimated job impacts using IMPLAN economic and modeling tool for each RGGI state and the region. The assumed spending in each RGGI state comes from the following activities: construction of generating resources, transmission, energy efficiency installations and new electric vehicle charging infrastructure; operations of energy resources, avoided gas station activity displaced by electric vehicles, avoided natural gas and petroleum consumption; and consumer and business re-spending of electricity, natural gas, petroleum and transportation costs savings.

<sup>175</sup> 2015 New York State. "New York State Energy Plan," 2015 available at <http://energyplan.ny.gov/Plans/2015>.

needs of former plant workers with the workforce opportunities being generated under New York's new energy regime.

### **3.2 Federal Support Mechanisms**

In addition to the state programs described above, several federal support mechanisms may be available to New York communities impacted by the closure of coal-fired generators.

#### **3.2.1 Partnerships for Opportunity and Workforce and Economic Revitalization (POWER) Program**

The POWER program represents a unified effort to provide a host of services and assistance to communities facing economic difficulties due to changes in the “coal economy,” which the program describes as “the complete supply chain of coal-reliant industries.” Included in the coal economy are industries related to coal mining, coal-fired power plants, and related supply chain and transportation businesses.<sup>176</sup> The role of the POWER program is to target federal resources to communities impacted by the troubles of the coal gnomon, with a focus on projects that will promote economic growth, job creation, and reemployment opportunities for coal economy workers, and projects that are “specifically identified under local and regional economic development plans that were collaboratively produced by diverse local and regional stakeholders,” such as IDAs, municipalities, and labor unions.<sup>177</sup>

The program is administered by the U.S. Economic Development Administration (EDA), which acts as the coordinator between participating federal agencies. EDA ensures that POWER grants are awarded to projects that will lead to economic diversification and workforce benefits in impacted communities and that the various federal funding streams available to projects are aligned, integrated, and not duplicative.<sup>178</sup>

There is no single, streamlined list of eligibility criteria for the POWER program. Rather, grants are awarded to communities and regions, including those impacted by the closure of coal-fired generators, that “can reasonably demonstrate how changes in the coal economy have

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<sup>176</sup> United States Economic Development Administration. “The Partnerships for Opportunity and Workforce and Economic Revitalization (POWER) Initiatives,” available at <https://www.eda.gov/power/>.

<sup>177</sup> *Id.*

<sup>178</sup> *Id.*

resulted, and/or are anticipated to result in job losses and layoffs” in that facility. The program focuses on communities with strategic plans that combine both economic and workforce development initiatives because “experience has shown that projects which integrate both economic development and workforce development solutions with broad community partnerships are more successful than when these solutions are pursued independently.”<sup>179</sup>

Grants are announced through a Federal Funding Opportunity (FFO). The program was launched in March 2015 and offered up to \$35 million in funding from a combination of federal agencies, including up to:

- \$12.5 million in funding from the EDA;
- \$20 million from Department of Labor’s Employment and Training Administration (ETA);
- \$2.5 million from the Small Business Administration (SBA); and
- \$500,000 from Appalachian Regional Commission (ARC).<sup>180</sup>

For example, the first round of grant recipients included:

- \$200,000 to the Chicago Transit Authority in Illinois to provide employment and training opportunities for bus diesel mechanics and technicians as part of the conversion of the retired Fisk coal-fired power plant into a bus storage and service facility;
- \$124,000 to the Lewis County Economic Development in Chehalis, Washington, to mitigate job losses due to the closure of a local coal plant through an economic diversification and revitalization plan.<sup>181</sup>

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<sup>179</sup> United States Economic Development Administration, Press Release, “U.S. Commerce Department Announces Up To \$35 Million in Available Funding Through Obama Administration’s Partnerships for Opportunity and Workforce and Economic Revitalization (POWER) Initiative,” May 1, 2015 available at <https://www.eda.gov/news/press-releases/2015/05/11/power.htm>.

<sup>180</sup> Although the EDA coordinates the separate federal funding streams, communities must apply separately to each agency for the available funds. *Id.*

<sup>181</sup> The White House Office of the Press Secretary, “FACT SHEET: Administration Announces New Workforce and Economic Revitalization Resources for Communities through POWER Initiative,” October 15, 2015 available at <https://www.whitehouse.gov/the-press-office/2015/10/15/fact-sheet-administration-announces-new-workforce-and-economic>.

The POWER program is related to President Obama's POWER+ request to Congress for Fiscal Year 2016. In recognition of the immediacy of the problem facing the coal economy and the need for rapid action, the EDA and several partner federal agencies developed the POWER program as a "down payment" on the President's more expansive initiative.<sup>182</sup>

### **3.2.2 Additional Federal Resources**

#### **Department of Labor: Employment and Training Administration (ETA)**

The ETA awards POWER National Dislocated Workers Grants (DWGs) to state workforce development agencies on behalf of eligible coal-impacted communities. The program has already awarded millions of dollars during FY 2015 and intends to provide technical assistance to state and local workforce development agencies and partners through FY 2017.<sup>183</sup> The POWER Initiative National Dislocated Worker Grants funded by ETA are a subset of the DWG program targeted specifically to layoffs in the coal industry. POWER DWGs are awarded to state workforce agency applicants who meet the eligibility requirements, which include demonstrating that there are substantial layoffs that are a direct result of downturns in the coal economy affecting miners, power plant workers, transportation/logistics workers, and some manufacturing workers. State workforce agencies are the only eligible applicant type and must use their own procedures for recruiting participants for the grant.<sup>184</sup>

To date, ETA has awarded four POWER grants to workforce agencies in Kentucky, Ohio, Virginia, and Pennsylvania.

#### **Environmental Protection Agency: Office of Land and Emergency Management.**

Initiated in 2010, the Area-Wide Planning Program (AWP) provides grant funding and technical assistance to brownfields communities selected by grant competition.<sup>185</sup> The program is

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<sup>182</sup> *Id.*

<sup>183</sup> See the Employment and Training Administration's Guidance and eligibility standards available at [https://wdr.doleta.gov/directives/corr\\_doc.cfm?DOCN=4439](https://wdr.doleta.gov/directives/corr_doc.cfm?DOCN=4439).

<sup>184</sup> United States Department of Labor. *Training and Employment Guidance Letter No. 32-14*. Between State Workforce Agencies, *et al.*, and Portia Wu assistant secretary entered May 11, 2015, available at [http://wdr.doleta.gov/directives/attach/TEGL/TEGL\\_32-14\\_ACC.pdf](http://wdr.doleta.gov/directives/attach/TEGL/TEGL_32-14_ACC.pdf).

<sup>185</sup> See Brownfields Area Wide Planning Program, available at [https://www.epa.gov/sites/production/files/2015-09/documents/awp-factsheet-july-2012\\_0.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/awp-factsheet-july-2012_0.pdf).

part of the Partnership for Sustainable Communities collaboration among EPA and the Department of Transportation (DOT) and Housing and Urban Development (HUD). Under the POWER initiative, EPA will initiate a grant competition process in 2016 to be funded in 2017 that will include areas impacted by closing or closed coal-fired power plants.<sup>186</sup>

### **Department of Energy: Jobs Strategy Council**

In August 2015, the U.S. Department of Energy (DOE) announced the formation of a labor working group that includes members of the Utility Workers Union of America, the International Brotherhood of Electrical Workers and the United Steelworkers. The DOE will use the partnership to provide technical expertise and assistance to the participating unions and groups interested in examining how energy technologies and policies can develop jobs in the energy sector. The Jobs Strategy Council will also provide energy related technical assistance resources to POWER grant recipients. Applicants will receive technical assistance from DOE offices, federal national labs, and offered access to investment in a range of energy technology and manufacturing projects through the Loan Program Office.<sup>187</sup>

### **Small Business Administration – Small Business Development Center (SBDC)**

The U.S. Small Business Administration (SBA) is investing in regional innovation clusters throughout the U.S. that include energy, manufacturing, and advance defense technologies, among other industries. The Wood Products Cluster, initiated in 2015, supports the POWER Initiative for coal communities. The clusters for innovation will support small businesses by fostering synergistic networks with university researchers, regional economic organizations, and investors. The SBA intends to award preference points to applicants serving coal-impacted communities.<sup>188</sup> For New York State, the Buffalo District Office’s operating area includes the 14 westernmost counties. The grants will enable coal-impacted communities to

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<sup>186</sup> United States Department of Commerce. “POWER Initiative, Federal Agency Participation and FY 2016 Commitments.” June 13, 2016 available at <https://www.eda.gov/power/agencies.htm>.

<sup>187</sup> Meister, Jake. “DOE Enters Labor Group to Create Jobs Under the Clean Power Plan.” Industrial Maintenance & Plant Operation. Advantage Business Media, Aug. 13, 2015, available at <http://www.impomag.com/news/2015/08/doe-enters-labor-group-create-jobs-under-clean-power-plan>.

<sup>188</sup> United States Small Business Administration. “SBA Offices and Resource Partners | The U.S. Small Business Administration | SBA.gov.” June 13, 2016 available at <https://www.sba.gov/tools/local-assistance/ric>.

secure technical assistance and counseling to existing and aspiring businesses within the innovation cluster.<sup>189</sup>

### **Department of Treasury, Community Development Financial Institutions (CDFI) Fund**

The Community Development Financial Institution (CDFI) Fund was created to expand the availability of financial services in distressed urban and rural communities. Traditionally CDFI program participants gain access to lines of credit, loans, grants, investment capital and financial services. The CDFI Fund will support POWER partnership communities through the New Market Tax Credit (NMTC) Program application. The NMTC benefits incentivize community development and economic growth through the use of tax credits to attract private investment.<sup>190</sup>

### **SelectUSA and Access to Foreign Direct Investment (FDI)**

SelectUSA is a government-wide program administered by the U.S. Department of Commerce, International Trade Administration. The program is intended to facilitate business investments in the United States that generate jobs and help foreign entities navigate the local regulatory landscape.<sup>191</sup> SelectUSA is one of the federal agencies partnered with the POWER program and can provide POWER grant recipients access to the resources related to foreign direct investment and export promotion.<sup>192</sup>

### **Department of Commerce, National Institute of Standards and Technology: Manufacturing Extension Partnership (MEP)**

Since 1988, the Hollings Manufacturing Extension Partnership (MEP) has leveraged services and partnerships through collaborations with federal, state and local entities to develop new products and link manufacturers to global markets. The MEP Center network will assist

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<sup>189</sup> For full information for the SBA New York office, see <https://www.sba.gov/offices/district/ny/buffalo/about-us>.

<sup>190</sup> United States. Department of the Treasury. “New Markets Tax Credit Program,” Community Development Financial Institutions Fund. June 13, 2016 available at [https://www.cdfifund.gov/Documents/NMTC%20Fact%20Sheet\\_Jan2016v2.pdf](https://www.cdfifund.gov/Documents/NMTC%20Fact%20Sheet_Jan2016v2.pdf).

<sup>191</sup> United States Department of Commerce. “About SelectUSA,” International Trade Administration, June 13, 2016 available at <https://www.selectusa.gov/about-selectusa>.

<sup>192</sup> The White House Office of the Press Secretary, “FACT SHEET: The Partnerships for Opportunity and Workforce and Economic Revitalization (POWER) Initiative,” March 15, 2015 available at <https://www.whitehouse.gov/the-press-office/2015/03/27/fact-sheet-partnerships-opportunity-and-workforce-and-economic-revitaliz>.

POWER grantee communities with the development of strategies to address the needs for diversification, risk mitigation, market research, and entry into new and export markets.<sup>193</sup>

### **Corporation for National and Community Service (CNCS)**

The Corporation for National and Community Service (CNCS) is a federal agency that invests in nonprofit and faith-based groups, including: AmeriCorps, Senior Corps, the Social Innovation Fund and the Volunteer Generation Fund. Through those partnerships, CNCS provides leadership, training, coordination and resources to mobilize volunteers and make the nonprofit sector more effective.<sup>194</sup> CNCS will work to support POWER grantees to connect coal-impacted communities with CNCS State Offices to leverage AmeriCorp and other CNCS member groups for collaboration on anti-poverty efforts.<sup>195</sup>

The federal programs listed have been described as a “down-payment” to address the need to support coal communities, impacted workers and their families. By all accounts, millions more in investments will be needed to address the scope of the crisis.<sup>196</sup> A number of House and Senate Bills have been proposed to address displaced workers in coal communities.<sup>197</sup>

## **4. Conclusion**

A number of technological and market forces have fostered the transition away from fossil fuels and toward a clean energy economy in New York. Already more and more cost-effective clean energy resources, such as wind and solar, continue to increase in availability and are poised to maintain grid reliability despite the closure of aging and inefficient infrastructure in the electric sector. New York State now has the opportunity to support the shift to a clean energy

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<sup>193</sup> United States Department of Commerce. NIST. National Institute of Standards and Technology. April 12, 2016 available at <http://www.nist.gov/mep/about/index.cfm>.

<sup>194</sup> For more information about National Service, see <http://www.nationalservice.gov/about>.

<sup>195</sup> See EDA Summary of CNCS Partnership, available at <https://www.eda.gov/power/agencies.htm>.

<sup>196</sup> Morric, Adele C. “Build A Better Future for Coal Workers and Their Communities,” Brookings: Climate and Energy Economics Discussion Paper, April 25, 2016, available at <http://www.brookings.edu/~media/research/files/papers/2016/04/25-carbon-tix-coal-miners-morris/build-a-better-future-for-coal-workers-and-their-communities-morris.pdf>.

<sup>197</sup> The Healthy Employee Loss Prevention Act (HELP Act), available at <https://www.govtrack.us/congress/bills/114/hr3689>; also see the Clean Energy Work Just Transition Act, available at <https://www.govtrack.us/congress/bills/114/s2398/text>.

economy by providing fiscal and economic support to the communities where those closing facilities once operated.

Case studies discussed throughout the report provide insight into best practices to encourage the decommissioning and structural redevelopment of retired coal-fired generator sites. Many of these case studies have highlighted the importance of facilitating the development of task forces as a platform for dialogue across multiple agencies and interests including labor, community groups, development agencies and centers of higher education. Task forces can assist in developing retraining and new jobs initiatives to address vulnerabilities in economic activity.

There is no single, one-size-fits-all solution for communities experiencing a coal plant closure. Rather, each community must develop a strategy that best suits its unique circumstances. New York State regulators, municipalities, and other engaged parties should consider adopting the below recommendations in a manner that best suits the community's needs:

- Ensure that the state funds designated by Governor Cuomo's Fiscal Year 2016 Budget are allocated for fiscal support, feasibility studies, and mediated community partnership discussions in communities with full and partial closure of coal-fired power plant facilities;
- Develop and implement a state-led task force, similar to the process cultivated in Massachusetts and other states, to:
  - Ensure inclusion and communication across state agencies and impacted stakeholders;
  - Provide a platform for discussion and a clearinghouse for resources that would ensure that all communities are positioned to avail themselves of the grants and opportunities made available under the Obama Administration's Power Plus Program; and
  - Ensure participation across a broad number of stakeholders. These initiatives will most likely achieve the greatest success when supported by labor unions, school districts, community advocates and local economic development



officers currently involved in addressing the direct and indirect impacts of changing economic activity;

- Develop blueprint policies that leverage all existing state and local programs, including the integration of the goals of the REV process, with initiating and supporting networks of social services, training programs, and economic development initiatives. New York has tremendous potential to adopt policies and fund workforce training programs to ensure that there is skilled labor available to meet the opportunities created through investments in clean energy generation and infrastructure;
- Ensure that New York State will be a financial partner in the transition process by providing access to grants and matching funds for grants, loans and other fiscal tools so that there are no financial barriers to participation in federal programs, including the Power Plus Plan;
- Incorporate just transition policies into the economic development and policy initiatives supporting the growth of a low carbon economy. For example, ensure that job training programs designed to support former electric sector workers complement the investments in the science, technology and manufacturing that are currently underway in New York;
- Establish benchmark programs to prioritize Environmental Justice to ensure that low-income and communities of color fully participate and share in the benefits of the training, re-training and other labor investment in the transition to clean energy; and
- Align the workforce training initiatives with approaches to meeting the goals of continued emission reduction measures of the Regional Greenhouse Gas Initiative baseline scenario and New York State's Clean Energy Standard by targeting efforts to lower transportation, buildings, industrial and electric emissions.

The above recommended approaches provide the necessary policy framework to best support the market and technological drivers for the emergence of a robust clean energy

economy, while providing support for communities impacted by the closure of electric generators.

## APPENDIX A

### *Proposed State Plant Closing Statutes from 1982 to 1987*

CT: Connecticut. Gent. Stat Ann. §§ 31-51o (West Supp. 1988) (requiring companies with 100 or more employees to continue terminated employees' health benefits for 120 days following a relocation or closing).

HI: Haw. Rev. Stat § 394B-9 to 10 (Supp. 1988) (requiring companies with 50 or more employees to provide affected employees with 45 days written advance notice of a closing or relocation and severance pay equaling the difference between the worker's average weekly wage and four weeks' unemployment benefits).

ME: Rev.Stat. Ann. Tit. 26 § 625-B (1988) (requiring businesses employing more than 100 full-time workers to provide to the affected employees and community 60 days notice of intention to shut down, and to pay terminated employees severance pay equal to one week's salary per year of tenure). This faced an unsuccessful legal challenge and did not involve the dormant commerce clause. *Fort Halifax Packing Co., v. Coyne*, 482 U.S. 1 (1987) (affirming the Maine Supreme Court and holding that Me. Rev. Stat. Ann. Tit. 26, § 625-B (1988) was not preempted by the Employee Income Retirement Act or the National Labor Relations Act; on appeal, the court found that the Maine statute did not violate the contracts or due process clauses).

SC: SC Code Ann § 41-1-40 (law. Co-op 1986) (requiring any employer that requires its workers to give advance notice of quitting to post two weeks advance notice of closing).

TN: Tenn. Code. Ann § 50-1-601 to 602 (requiring companies that employ more than 50 workers to provide to affected employees and the state advance notice of workforce reductions of 50 or more workers).

WI: Wis. Stat. Ann § 109.07 (West 1988) (requiring businesses employing more than 100 workers to provide to the affected workers and community 60 days notice of intent to shutdown).

MD: Md. Ann. Code art. 83A, 3-301, 304 (1957 & 1988 Replacement Volume) (establishing voluntary guidelines for employers with at least 50 workers who are relocating operations or reducing the number of workers by 25% or 15 employees and recommending at least 90 days

advance notice to affected employees as well as the “appropriate continuation of benefits...” §3-304(b)(2).

MA: Mass. Gen. Laws. Ann ch. 149 § 182, ch. 151A, §71 A (West Supp. 1989) (setting voluntary standards of corporate behavior including the provision by employers with facilities of 50 or more workers of the longest practicable advance notice of a plant closing or partial closing and maintenance of income and health insurance benefits to affected employees).

MI: Mich. Comp. Laws. Ann §§ 450.732.736 (West 1988) (encouraging companies that employ 25 or more to give notice as early as possible to the state, the affected employees, and the community of a decision to close or relocate that displaces at least 25 workers).

MO: Mo. House Bill No. 1161 84<sup>th</sup> Gen. Assembly, 2d Sess. (1988) (“requiring employers of more than 100 to give one year advance notice of a closing, relocation or reduction in operations, to pay each affected employee a lump-sum severance payment equal to one week’s wage times the number of years of service, and to contribute to a community assistance fund an amount equal to ten percent of the total annual wages of all employees affected.”).

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