



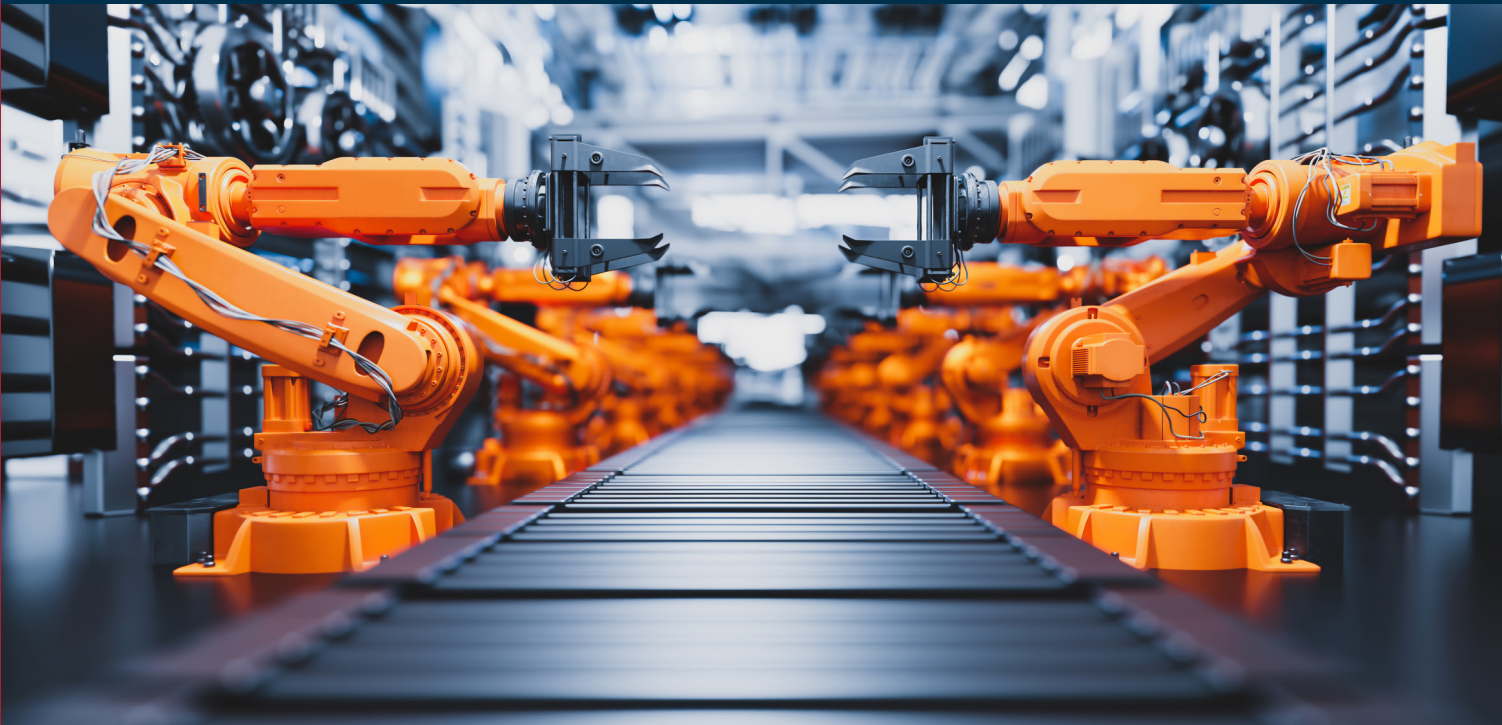
**CEEPR**

MIT Center for Energy and  
Environmental Policy Research

# The Roosevelt Project

Industrial Heartland Electric Vehicle  
Case Study Working Paper Series

Reimagine Mahoning Valley



Massachusetts  
Institute of  
Technology



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# **The Roosevelt Project**

Industrial Heartland Electric Vehicle  
Case Study Working Paper Series

## **Reimagine Mahoning Valley**

by Amanda K. Woodrum

**WP-2021-RP-IH-8**

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## **The Roosevelt Project**

### **A New Deal for Employment, Energy and Environment**

#### **About the Roosevelt Project**

The Roosevelt Project takes an interdisciplinary approach to the transitional challenges associated with progress toward a deeply decarbonized economy. The project aims to chart a path forward through the transition that minimizes worker and community dislocations and enables at-risk communities to sustain employment levels by taking advantage of the economic opportunities present for regional economic development. The first phase of the project involved an analytical assessment of cross-cutting topics related to the transition. The second phase of the project assesses the transition through the lens of four regional Case, working with local partners on the ground in the Industrial Heartland, Southwest Pennsylvania, the Gulf Coast, and New Mexico. The project was initiated by former Secretary of Energy, Ernest J. Moniz, and engages a breadth of MIT and Harvard faculty and researchers across academic domains including Economics, Engineering, Sociology, Urban Studies and Planning, and Political Science.

#### **REPORT SPONSOR**



The Roosevelt Project would like to thank the Emerson Collective for sponsoring this report, and for their continued leadership on issues at the intersection of social justice and environmental stewardship.

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Sustainable Communities

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## **Reimagine Mahoning Valley**

Getting from “Steel Valley” to “Voltage Valley” and  
Shared Prosperity White Paper #8

**Amanda K. Woodrum**

# Introduction

As the automotive industry is embracing electric vehicles to meet consumer demand and federal fuel efficiency standards, the people of Mahoning Valley are working to secure their place in the next generation of vehicles. The region has existing assets and an abundance of expertise in the skilled trades that can be built upon to lead the automotive industry into the 21<sup>st</sup> century.<sup>1</sup> It will take significant state and federal resources, however, to truly transform the region from steel valley to voltage valley.

The Biden administration has made commitments to this effect. In February of 2021, President Biden issued an Executive Order directing his administration to “revitalize and rebuild manufacturing capacity” across the country to maintain America’s competitive edge, create good jobs, advance the fight against climate change, and ensure people of color and those living in distressed communities can prosper again.<sup>2</sup> The Mahoning Valley is such a distressed community. A community that has been left behind.

The collapse of the steel industry, federal trade policy, global outsourcing of jobs, and, more recently, General Motors’ 2019 abandonment of its Lordstown automotive plant, has left the region with high rates of unemployment, low incomes, and high levels of poverty as well as abandoned factories, vacant and deteriorating buildings and damaged lands. The people of Mahoning Valley have faced significant hardship—many living day-to-day, week-to-week, with little income coming in and few economic opportunities. The region’s people, however, have a dogged determination to reimagine and rebuild their communities as places where all residents can thrive.<sup>3</sup>

Revitalizing and rebuilding the region’s manufacturing capacity, if done right, can bring shared prosperity to the Mahoning Valley. Accomplishing this goal, however, will require significant federal funding for infrastructure. Federal policymakers must ensure these funds come with community and labor standards designed to promote good union jobs and pathways into those union jobs for Black workers, women, and other people of color.

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<sup>1</sup> Eastgate Regional Council of Governments, Comprehensive Economic Development Strategy: 2020-2022 at <https://eastgatecog.org/docs/default-source/economic-development/eastgate-2020-2022-ceds.pdf>.

<sup>2</sup> <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/02/24/executive-order-on-americas-supply-chains/>

<sup>3</sup> Gabbatt, Adam. “It’s devastating.’ End of GM in Ohio town as Trump fails to bring back midwest jobs.” The Guardian, 23 August 2019, [www.theguardian.com/business/2019/aug/23/general-motors-factory-ohio-lordstown](http://www.theguardian.com/business/2019/aug/23/general-motors-factory-ohio-lordstown)



## Brief history of the Steel Valley

Youngstown's first blast furnace opened around 1802, roughly the same time Ohio became a state in the union.<sup>4</sup> Large deposits of iron in the region, coupled with ready access to coal both as a fuel source and an ingredient in the production of steel (via its purified coke form), catalyzed the iron and steel industry in Northeast Ohio. As the nation expanded westward, demand for iron and steel—for use in construction of the national railroad, for instance—cemented the region's status as the epicenter of the industrial revolution.

The Mahoning Valley grew with the rise of the steel industry in the U.S., becoming known as Steel Valley.<sup>5</sup> People flocked to the region to secure jobs in the steel mills.<sup>6</sup> The automobile industry, with steel being its "material of choice" also boomed in the region.<sup>7</sup> General Motors' Lordstown plant produced its first car in 1966, and two years later opened a metal fabricating plant on the same property.

In the 1970s, however, foreign competitors benefiting from cheap labor and government subsidies, as well as newer and more modern, efficient facilities, began to flood open U.S. markets with steel.<sup>8</sup> Substantial increases in the number of finished products made from steel elsewhere, and then imported into the U.S., further shut U.S. steel producers out of the market. In addition, other substitute materials like aluminum and plastic composites gained traction, and the U.S. steel industry suffered from a failure to innovate.<sup>9</sup>

By the late 1970s, the U.S. steel industry began to collapse. On September 19, 1977, known as "Black Monday," Youngstown Sheet & Tube announced it was shutting down its largest mill in the Mahoning Valley, putting more than 5,000 people out of work.<sup>10</sup> "Black Monday" is a day marked as a key moment in time for deindustrialization and urban decline of this country. In the Mahoning Valley, it was the just the first of five major steel mills to close within a few years of each other.<sup>11</sup> Other workers in businesses connected to the steel mills—rail, steel fabrication, trucking, construction—were soon laid off as well. And the places where these workers had spent their money, such as restaurants and grocery stores, suffered too.

The region's saving grace was continuing as an important player in the automobile supply chain. The GM Lordstown plant had as many as 12,000 workers at one point.<sup>12</sup> A number of local companies also supplied parts to the Lordstown plant, as well as other auto plants in the Northeast Ohio region.

Over many years, federal trade policy helped whittle away at these automotive industry jobs. In the 1990s and early 2000s, the North American Free Trade Agreement enabled U.S. manufacturers to outsource jobs to Mexico where they had more freedom to exploit workers, paying them much lower wages in less safe conditions. Delphi Automotive which relocated from Warren, Ohio to Juarez, Mexico, is only one such example. Successive foreign trade

<sup>4</sup> <https://www.ohiosteel.org/ohio-steel-industry/history/>

<sup>5</sup> Gabbatt, Adam. "'It's devastating.' End of GM in Ohio town as Trump fails to bring back midwest jobs." The Guardian, 23 August 2019, [www.theguardian.com/business/2019/aug/23/general-motors-factory-ohio-lordstown](http://www.theguardian.com/business/2019/aug/23/general-motors-factory-ohio-lordstown)

<sup>6</sup> <https://ishof.org/assets/africanamericanexperienceyoungstown.pdf>

<sup>7</sup> <http://www.prguru.com.au/automotive-steel-history-steel-within-automotive-industry/>

<sup>8</sup> <https://www.ohiosteel.org/ohio-steel-industry/history/>

<sup>9</sup> How Trade Did and Did Not Account for Ohio Manufacturing Job Losses at

<https://carnegieendowment.org/2018/12/10/how-trade-did-and-did-not-account-for-manufacturing-job-losses-pub-77794>

<sup>10</sup> <https://beltmag.com/40th-anniversary-youngstowns-black-monday-oral-history/>

<sup>11</sup> How Trade Did and Did Not Account for Ohio Manufacturing Job Losses at

<https://carnegieendowment.org/2018/12/10/how-trade-did-and-did-not-account-for-manufacturing-job-losses-pub-77794>

<sup>12</sup> <https://www.tribtoday.com/news/local-news/2018/11/a-timeline-of-gm-through-the-years/>



policies continued the trend, including the admittance of China into the World Trade Organization. After successive waves of layoffs, GM shut down their Lordstown plant entirely in March of 2019. Again, the Valley is bearing the consequences of failed trade policies and the failure to innovate to meet rapidly changing market demands. Thousands of people have been harmed, from the employees who lost their jobs or left behind homes and families to transfer to other facilities, to the local businesses who serviced them or provided them with supplies.

## Mahoning Valley: Community Left Behind

As the steel mills closed, many people left the Mahoning Valley. The population of Youngstown is half what it once was. The city of Warren's lost a third of its population. The people of the region are also older, on average, than other parts of the state, as young people continue to leave.<sup>13</sup> The unemployment and poverty rates are higher, while median income and labor force participation rates are lower, than the state as a whole. The poverty rate for the Black and Latinx population is particularly high.

As a result of the relatively low standard of living in the region, people in the Mahoning Valley tend to live shorter lives and report having a lower quality of life. Substance abuse has become a serious issue. See figure 1 below.

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<sup>13</sup> Eastgate Regional Council of Governments, Comprehensive Economic Development Strategy: 2020-2022 at <https://eastgatecoq.org/docs/default-source/economic-development/eastgate-2020-2022-ceds.pdf>.

**Figure 1**

<b>People in the Mahoning Valley have lower incomes, less healthy rest of the state</b>						
Demographic, economic and health data						
	Youngstown	Warren	Mahoning County (Youngstown)	Trumbull County (Warren)	Columbiana County	Ohio
<b>Population</b>						
1970	140,880	63,494	304,545	232,579	108,310	10,652,017
2019	65,479	39,307	229,961	200,367	103,190	11,655,397
<b>Age</b>						
20-44			29.1%	28.1%	28.5%	31.6%
45-64			28.1%	28.1%	29.0%	26.8%
65+			21.4%	22.1%	21.2%	17.5%
<b>Race</b>						
Black			15%	8.4%	2.3%	12.7%
Hispanic			6.5%	1.9%	1.9%	4.0%
White			75.5%	86.9%	93.7%	78.4%
<b>Labor Force Participation (16 and older)</b>						
White			60.3%	55.8%	57.8%	63.3%
Black			57.7%	53.7%	31.8%	62.1%
Hispanic			60.7%	54.0%	72.3%	68.3%
<b>Unemployment Rate</b>						
			7.4%	7.5%	7.1%	5.4%
<b>Median Household Income</b>						
			\$46,042	\$47,280	\$48,345	\$56,602
<b>People Below Poverty Level</b>						
Black			39.1%	35.5%	41.7%	29.6%
Hispanic			35.0%	30.9%	26.0%	24.7%
White			12.6%	14.9%	13.3%	11.1%
<b>% Households w/out access to vehicle</b>						
			8.5%	7.1%	6.8%	7.9%
<b>County Health Ranking (of 88)</b>						
Length of life			61	76	50	
Quality of life*			80	68	53	
Socioeconomic factors**			79	82	48	
Physical environment***			69	66	68	

Sources: 2019 American Community Survey 5-year Estimates, Ohio Bureau of Labor Market Information, Robert Wood Johnson Foundation 2021 County Health Rankings, and Ohio Environmental Protection Agency Brownfield Inventory

\*Quality of life index considers surveys of people self-reporting on their physical and mental health status

\*\*Socioeconomic factors consider education, employment, income and family/social support indicators.

\*\*\*Physical environment considers air & water quality, housing indicators, transit access.

## Building “Voltage Valley”

As more consumers demand that corporations produce environmentally-friendly and socially-responsible goods and services, such as electric vehicles and alternatives to single-use plastics, the sustainable manufacturing capacity needed to produce those goods and services will also increase. With the proper resources, the Mahoning Valley can play a key role in producing these goods and providing the related services, while positioning itself to export value-added products and not just raw materials. The backbone of manufacturing—facilities, industrial sites, freight rail and river transportation networks—still exists in the Valley. The region is also home to other assets and opportunities that can be built upon.

One such opportunity is in the production of battery cells used in both electric vehicles and the storage of renewable energy. One major asset for the transition from Steel Valley to Voltage Valley is ***BRITE Energy Innovators, Ohio’s only energy tech incubator***, headquartered in Warren, Ohio.<sup>14</sup> BRITE focuses on helping clients develop, launch and grow entrepreneurial initiatives in battery technology, energy storage, grid resiliency, and electric mobility. It provides founders with mentorship, sales and marketing support, and access to advanced equipment to test technology. In 2020, BRITE’s support helped to create nearly 400 jobs, secure over \$100 million in investment, and generate nearly \$20 million in startup revenue. For instance, they helped Electrada launch an innovative charging system for electric vehicles.

Recently, ***Ultium Cells, a GM joint venture with LG Energy Solutions***, chose Mahoning Valley to construct a \$2.3 billion electric battery plant in Lordstown. The decision to locate in the region is part of a national trend towards reshoring manufacturing on U.S. soil, in this case rather than continued reliance on battery cells for electric vehicles produced in China.<sup>15</sup> The GM venture has plans to hire more than 1,100 people, and recent agreements suggest a willingness of this joint venture to support United Auto Workers’ effort to unionize the plant.<sup>16</sup>

Another opportunity for the region is in the production of electric vehicles themselves. On this front, the Mahoning Valley has its foot in the door. ***Lordstown Motors Corp.*** purchased the Lordstown GM plant with plans to convert the facility to build a battery-powered pick-up truck for commercial fleet purposes (such as those used by electric utilities).<sup>17</sup> The company, however, has gotten off to a rocky start, with both financing and leadership issues, including claims the company misled investors and an associated investigation by the Securities and Exchange Commission.<sup>18</sup> More recently, Lordstown Motors Corp. and Foxconn announced a deal for the Taiwanese company to purchase the Lordstown manufacturing facilities as well as \$50 million in Lordstown Motors Corp. stock and the right to use the company’s electric vehicle technology. Foxconn has indicated plans to produce the Lordstown Motors Corp. EV

<sup>14</sup> Annual Report: Empowering Founders to Launch Energy Technology Solutions. BRITE Energy Innovators. 2020. <https://brite.org/wp-content/uploads/2021/03/BRITE-Annual-Report-2020.pdf>.

<sup>15</sup> <https://www.alleghenyfront.org/with-electric-vehicles-ohios-steel-valley-remakes-itself-as-voltage-valley/>

<sup>16</sup> Grant, Julie. “Voltage Valley Starts Workforce Training Efforts, Despite Troubles at Electric Trunk Plant.” The Allegheny Front, 24 June 2021, [www.alleghenyfront.org/voltage-valley-starts-workforce-training-efforts-despite-troubles-at-electric-truck-plant/](http://www.alleghenyfront.org/voltage-valley-starts-workforce-training-efforts-despite-troubles-at-electric-truck-plant/). See also, <https://www.freep.com/story/money/cars/general-motors/2021/05/25/gm-battery-factories-uaw-ultium/7439602002/>.

<sup>17</sup> Id.

<sup>18</sup> Id. See also Michael Wayland, CNBC, Shares of embattled EV startup Lordstown Motors surge on appointment of ex-Icahn executive as CEO” at <https://www.cnbc.com/2021/08/26/lordstown-motors-shares-surge-on-appointment-of-ex-icahn-exec-as-ceo.html>.

pickup truck at the Lordstown manufacturing facilities, alongside other electric vehicles.<sup>19</sup> Despite this, people in the region remain optimistic for Voltage Valley and determined to make it happen.<sup>20</sup>

The expectation is jobs in these new industries will pay decent wages if they are in fact union. They will, however, require some new and advanced skills in addition to some of the existing skills in the region.<sup>21</sup> In early 2020, the federal Department of Energy funded Youngstown State University, in partnership with the Oak Ridge National Laboratory and labor unions, to establish a **workforce energy training center for energy storage technology**.<sup>22</sup> GM also provided a \$5 million grant to train 1,500 workers in electric vehicle and battery technology.<sup>23</sup> This training complements existing courses and union apprenticeship programs in solar, wind, robotics electric vehicle infrastructure and IT networks.<sup>24</sup>

Youngstown State University also houses the **Center for Innovative in Additive Manufacturing**.<sup>25</sup> Additive manufacturing, more commonly referred to as 3-D printing, is used to products prototypes, parts and tools made from a wide variety of materials from metals to plastic. The Center develops industry partnerships, advances research, and provides education and workforce training.

Another industry-led training partnership—**WorkAdvance**—exists between the Mahoning Valley Manufacturers Coalition, Eastern Gateway Community College, Goodwill Industries, and the Mahoning Youngstown Community Action Program. This is an exciting asset in the Valley that, with the right resources, could be scaled up.<sup>26</sup> By partnering with local manufacturers like Nordson Corp., WorkAdvance targets unemployed and underemployed low-paid workers, including second chance residents with past convictions from their youth, with paid on-the-job training opportunities coupled with classes to increase math and communication skills. The partnership also helps breakdown other barriers to employment, such as lack of reliable transportation, by providing things like bus passes, or covering costs of work boots or uniforms.

Bioplastics and other alternatives for single-use plastics could present another opportunity for the region to produce social-responsible goods. In March of 2021, **Goodyear Tire and Rubber Company, headquartered in Akron, Ohio**, announced its **commitment to make its tires from U.S. soybean oil by 2040**, as part of their new policy for responsible sourcing of raw materials.<sup>27</sup> Even more recently, LG Chem announced a new joint venture with a Chicago-based agricultural company to produce corn-based bioplastic by 2025 for use in food packaging and disposable silverware, among other things.

**Ohio has long been a global leader in plastic.** With the right support, we can now become the leader in the next generation of plastic alternatives. On this front, the city of Struthers, a

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<sup>19</sup> Mark Arehart, WKSU, [Foxconn-Lordstown Motors Deal Could Open the Door for Multiple Electric Vehicle Brands](https://www.wyso.org/local-and-statewide-news/2021-10-11/foxconn-lordstown-motors-deal-could-open-the-door-for-multiple-electric-vehicle-brands) (October 11, 2021) at <https://www.wyso.org/local-and-statewide-news/2021-10-11/foxconn-lordstown-motors-deal-could-open-the-door-for-multiple-electric-vehicle-brands>.

<sup>20</sup> See Youngstown Mayor Tito Brown speaking at press event for ReImagine Appalachia at <https://www.facebook.com/113388530380921/videos/2096477113824006>; <https://www.alleghenyfront.org/with-electric-vehicles-ohios-steel-valley-remakes-itself-as-voltage-valley/>.

<sup>21</sup> Id.

<sup>22</sup> <https://energynews.us/2021/06/15/ohios-voltage-valley-looks-to-develop-workforce-for-electric-vehicle-industry/>

<sup>23</sup> Grant, Julie. "Voltage Valley Starts Workforce Training Efforts, Despite Troubles at Electric Trunk Plant." The Allegheny Front, 24 June 2021, [www.alleghenyfront.org/voltage-valley-starts-workforce-training-efforts-despite-troubles-at-electric-truck-plant/](http://www.alleghenyfront.org/voltage-valley-starts-workforce-training-efforts-despite-troubles-at-electric-truck-plant/).

<sup>24</sup> <https://energynews.us/2021/06/15/ohios-voltage-valley-looks-to-develop-workforce-for-electric-vehicle-industry/>

<sup>25</sup> <https://ysu.edu/center-for-innovation-in-additive-manufacturing>

<sup>26</sup> Lisa Solley, The Business Journal, WorkAdvance Program Fills Gaps (October, 2019) <https://businessjournaldaily.com/workadvance-fills-workforce-gaps/>.

<sup>27</sup> <https://www.aqdaily.com/news/soy-checkoff-goodyear-use-soybean-oil-tires/>

former steel town on the Mahoning River, is working with partners to create a regional development plan for green industrial manufacturing and reviving dormant physical and social infrastructure in the process. City leaders envision *redeveloping a former steel site as processing facilities used to turn industrial fibers into bioplastic and paper* and *adjacent farmland being used to produce industrial fibers from hemp* via regenerative agriculture practices.

Struthers officials note the *existing rail and river transportation network available* in the region, as one valuable asset for moving goods efficiently in a 21<sup>st</sup> century sustainable economy. In fact, TJX—the parent company of TJ Maxx and HomeGoods, chose Lordstown to construct its distribution facility which opened in the spring of 2021, recognizing the strength of its freight and shipping capacity and prime location for reaching a large portion of the U.S. population, something that grew out of its history in steel and auto manufacturing.<sup>28</sup> In 2020, the business manager of the Youngstown/Warren Regional Chamber of Commerce conducted a *comprehensive analysis of the region's rail infrastructure connecting industrial sites, businesses and buildings*.<sup>29</sup> With the right resources to upgrade the system, this transportation network could be the backbone of the region's manufacturing renaissance.

Struthers, located on the Ohio border next to Pennsylvania and 130 miles north of West Virginia, believes it is well positioned to serve as a regional hub for catalyzing green manufacturing throughout the region and reviving legacy cities negatively impacted by the loss of coal and steel. The city's main partner in this endeavor is *Green Industrial Manufacturing Ecosystem (GIME)*, a non-profit organization with a mission to create a socially responsible manufacturing ecosystem in the Mahoning Valley. Together, the city, GIME and the Western Reserve Port Authority are already working to renovate a historical building at the former steel mill site that will serve as the effort's R&D hub for hemp waste product research, used to extract CBD oil from hemp products and house a bottling facility for local brewers. They are also expanding high-quality broadband to the location (something essential to meet the needs of modern manufacturing).

## Getting from “Steel Valley” to “Voltage Valley”

Considering its historic assets and new, innovative projects, the Mahoning Valley has great potential to thrive in the new energy economy. That is, if the right federal resources are allocated and state and local policies implemented. Getting from “Steel Valley” to “Voltage Valley” and, ultimately, shared prosperity will require a collective effort and all hands on-deck. The work is already underway.

The goals of the 2020-2022 Comprehensive Economic Development Strategy developed by the Eastgate Regional Council of Governments, covering Trumbull, Mahoning and Ashtabula Counties are to: 1) expand opportunities for individuals to learn and advance; 2) improve quality of life; and 3) spur global economic competitiveness and innovation.<sup>30</sup> Accomplishing these laudable goals, according to the strategy, will require reducing barriers to employment

<sup>28</sup> Eastgate Regional Council of Governments, Comprehensive Economic Development Strategy: 2020-2022 at <https://eastgatecoq.org/docs/default-source/economic-development/eastgate-2020-2022-ceds.pdf>. See also The Business Journal at <https://businessjournaldaily.com/tix-distribution-center-opens-at-limited-capacity/>.

<sup>29</sup> [https://www.regionalchamber.com/docs/default-source/ed-documents/2020-ed-year-in-review---print.pdf?sfvrsn=82ad000b\\_5&mc\\_cid=3adf25f5a1&mc\\_eid=91453045be](https://www.regionalchamber.com/docs/default-source/ed-documents/2020-ed-year-in-review---print.pdf?sfvrsn=82ad000b_5&mc_cid=3adf25f5a1&mc_eid=91453045be)

<sup>30</sup> Eastgate Regional Council of Governments, Comprehensive Economic Development Strategy: 2020-2022 at <https://eastgatecoq.org/docs/default-source/economic-development/eastgate-2020-2022-ceds.pdf>.

in new and growing industries so more people can participate in the economy. It also means improving the quality of life in the region to retain young workers and attract new ones.<sup>31</sup> The former requires sector-based industry training partnerships and on-the-job training opportunities for new technologies. Improving the quality of life in the region means creating vibrant places and recreational facilities to improve the daily life of residents with enhanced connections between residents and those places (creating walkable, bikeable communities with access to public transportation).

Spurring economic competitiveness and innovation, while supporting the growth of existing businesses in the region, will require infrastructure investments—improving the multimodal transportation network, modernizing the electric grid and making quality broadband universal.<sup>32</sup> Huge swaths of the Mahoning Valley do not have access to broadband services, a pre-condition for a 21<sup>st</sup> century economy and smart manufacturing.<sup>33</sup>

In September of 2020, Eastgate Council of Governments convened an economic diversification summit of federal, state, and local stakeholders, facilitated by the federal Economic Development Administration, to identify and address economic development obstacles in the Mahoning Valley, particularly the 2019 GM plant closure.<sup>34</sup> In April of 2021, the group reconvened to host roundtables on specific topics, including infrastructure and workforce development.<sup>35</sup> Stakeholders prioritized (1) redevelopment of existing assets, (2) the provision of technical assistance and recruitment for new industries such as electric vehicles and advanced manufacturing opportunities, and (3) living wage, union jobs for low-paid and discouraged workers. Around the same time, the United Way of Trumbull County convened key stakeholders to conduct a community needs assessment and planning effort to identify and address challenges to improving the quality of life in Trumbull County.

The takeaways from the Comprehensive Economic Development Strategy, the economic diversification summit, and the Trumbull County community planning effort, when combined, present a community- and worker-centered sustainable development approach for the region and, ultimately, the path towards shared prosperity and community well-being.

### *1. Redevelopment of existing assets.*

High priorities for the region's economic development strategy include modernizing the region's infrastructure and redeveloping existing assets. The condition of the region's infrastructure has deteriorated. The community recognizes a safe and reliable transportation network, more modern energy systems, quality broadband throughout the region and healthy public water systems are a necessary part of revitalizing the region.<sup>36</sup>

Key stakeholders in the region also recognize the value of reusing and repurposing existing infrastructure in the region and improving those properties where necessary. This work starts with remediating the region's many brownfields—sites with the presence of hazardous

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<sup>31</sup> Id.

<sup>32</sup> Id.

<sup>33</sup> Id.

<sup>34</sup> "Youngstown Region Successfully Executes First Virtual REDS." EDI in the News, U.S. Economic Development Administration, 26 April 2021. <https://eda.gov/integration/news/stories/youngstown-first-virtual-reds.htm> (Regional Economic Diversification Summit (REDS)). The event was hosted by Youngstown State University, Eastgate Regional Council of Governments, and included federal partners such as the Appalachian Regional Commission, Environmental Protection Agency, Departments of Energy, Defense, Labor and Transportation, and the Small Business Administration. State partners included JobsOhio, DriveOhio, FlyOhio, BroadbandOhio, Office of Workforce Transformation, Ohio Dept. of Transportation, Ohio Public Works Administration, and Ohio Development Services Administration.

<sup>35</sup> [https://miro.com/app/board/o9J\\_LJYivm8=](https://miro.com/app/board/o9J_LJYivm8=/)

<sup>36</sup> Eastgate Regional Council of Governments, Comprehensive Economic Development Strategy: 2020-2022 at <https://eastgatecoq.org/docs/default-source/economic-development/eastgate-2020-2022-ceds.pdf>.

substances, pollutants, or contaminants due to operations of past industry that require clean up prior to expansion, re-development or reuse of the site.<sup>37</sup> Cleaning and reinvesting in these properties, according to the U.S. Environmental Protection Agency, improves the local tax base, removes blight, uses existing infrastructure rather than developing undeveloped or agricultural lands, and improves the environment, particularly waterways contaminated by industrial pollution.

According to the Ohio Brownfield Inventory collected by the Ohio Environmental Protection Agency, there are at least 370 acres of damaged lands and over 1 million square feet in building space, in need of remediation and rehabilitation to redevelop them or make them reusable.<sup>38</sup> The vast majority of brownfield acreage in the region are former steel facilities, including the former sites of Youngstown Steel & Tube, Republic Steel and U.S. Steel.

Community leaders also feel strongly about the need for specific efforts designed to retain young people in the Valley. Improving the quality of life locally will be key to doing so. Key stakeholders home in on the quality-of-life improvements needed in the region, including clean air and water, better public transportation, and quality broadband.

#### RECOMMENDATIONS

Significant federal resources will be needed to turn Steel Valley into Voltage Valley, resources for upgrading the electric grid, installing charging infrastructure for electric vehicles, and making broadband universal and affordable. Federal funds will also need to expand and electrify public transit. The region will also need investments to remediate brownfields and redevelop former steel facilities for productive purposes.

While local community leaders are ready to do their part, and helping lead the charge, the Mahoning Valley has limited resources, due in part to previous federal policies. The region deserves its fair share of federal climate infrastructure investments. These investments can create good union jobs in the short run while laying the foundation for a more sustainable, prosperous economy over the long haul.

Communities of Mahoning Valley should come together to follow the city of Cincinnati's high-road solar model—but across multiple communities. Residents of the Mahoning Valley can use their collective purchasing power, via municipal aggregation, to leverage investments in new energy facilities in the region. With the power of municipal aggregation, Cincinnati launched a solar farm in southeast Ohio to be built with union labor from the region.

*See Appendix A for details on the Cincinnati Solar Model.*

<sup>37</sup> Id.

<sup>38</sup> [https://epa.ohio.gov/derr/SABR/brown\\_dtb/brownfieldinventory](https://epa.ohio.gov/derr/SABR/brown_dtb/brownfieldinventory)



*a. Technical assistance and recruitment for expansion into new industries*

Summit participants covered the need to inspire research and development in the region, consider existing businesses in regional development strategies and approaches, support innovation within local supply chain networks, and provide technical assistance to local businesses in assessing their retooling requirements for meeting the needs of the new economy. Going forward, resources will be needed to increase access for local businesses and entrepreneurs to use incubators like BRITE, as well as expanded access to capital, education and training. The approach to retain young workers in the region, according to economic summit participants, includes encouragement of local entrepreneurship, and exposure to new technology from a young age to better prepare them for the future.

#### **RECOMMENDATION**

Technical Assistance for existing businesses to grow into new industries, can be provided by Manufacturing Extension Partnerships, Tech incubators like BRITE and industrial assessment centers. The Department of Commerce's Manufacturing Extension Partnerships (MEPs) and the Department of Energy's Industrial Assessment Centers both provide technical expertise and education to manufacturers on how to achieve energy savings.

Technical assessment programs will require more federal resources to support the needed work in the Mahoning Valley and elsewhere. The federal government should allocate resources for:

- Mapping opportunities for local companies to enter new markets and providing services that enable companies to enter new markets.
- Conducting feasibility studies to assess local company needs and options to gain entrance to new markets.
- Promoting capital investment in companies for any necessary retooling or upgrades.
- Offering union apprenticeship, pre-apprenticeship and training services.
- Investigating opportunities for legacy companies to re-shore in Appalachia and the Heartland.

All federal resources should be made contingent on a firm's willingness to promote sustainable manufacturing and industrial efficiency practices, diversity in hiring and training, and workers' rights to form unions.

## *2. Living wage, union jobs for low-paid and discouraged workers*

As demonstrated in Figure 1 above, a large portion of the population has been discouraged from participating in the labor force due to lack of opportunity and structural barriers in employment. Many others work in low-wage jobs. In fact, seven of the 10 most common occupations in the Mahoning Valley earn wages so low as to qualify a family of three for food assistance (retail, cashiers, fast food, janitors, waitresses, stocking, and nurses' aides).<sup>39</sup>

Federal infrastructure investments, as outlined above, if secured, can create many good jobs in the region while laying the foundation for a more sustainable economy. Ensuring shared prosperity and access to jobs for all residents will require developing employment pipelines for discouraged, under- and unemployed, and low-paid workers. The need to build these training pipelines is a recurring theme in the Mahoning Valley conversations related to community revitalization.<sup>40</sup> This includes the need for holistic workforce programs targeting returning citizens harmed by the opioid epidemic and the war on drugs, something that has hit the region hard, for re-entry into to the workforce.

The lack of living wage jobs in the region, combined with policies and practices that have excluded people of color and exploited low-wage workers, has made many working people feel apathetic and disengaged. Existing training programs often end up preparing people for jobs that don't exist in the region. United Way planning participants recognized this disconnect between training programs and actual jobs in the region further discourages workers. Related, the region has also been hit hard by the so-called war on drugs and opioid epidemic. Since having a past conviction creates significant barriers to employment, policymakers will need to develop a thoughtful approach towards enabling re-entry into the workforce.

### **RECOMMENDATION**

Community-labor training partnerships, like the Columbus Building Futures model listed in Appendix B, can break down barriers to employment and build pathways for low-paid and discouraged members of the community into good union jobs. A significant expansion of the WorkAdvance program is also merited. Both programs connect directly to employers in the region.

In connection with state and federal infrastructure investments directed into the region, and the creation of good jobs in the region, a targeted hiring program with a first-source hiring referral system, as described in the Staples CBA model in Appendix C, can help identify, recruit, and support low-paid and discouraged workers by breaking down barriers to employment and bridging connections to work being done in the region. A targeted hire program could include re-entry services, skills assessments, life skills training, access to higher education and the trades, child care, bus passes and other work support programs. State and federal resources will be needed to support this kind of training partnership and the associated services.

<sup>39</sup> Policy Matters Ohio at <https://www.policymattersohio.org/files/assets/workingforlessinyoungstown.pdf> (2020).

<sup>40</sup> Eastgate Regional Council of Governments, Comprehensive Economic Development Strategy: 2020-2022 at <https://eastgatecoq.org/docs/default-source/economic-development/eastgate-2020-2022-ceds.pdf>. See also

## Appendix A: Cincinnati Solar Model

### CINCINNATI SOLAR MODEL

Cincinnati Solar Procurement Project (Cincinnati, 2017)

Using the local purchasing power enabled by Ohio's Community Choice Aggregation policy, the city of Cincinnati issued a Request for Proposals (RFP) for a 25-MegaWatt solar project in order to help meet Cincinnati's electricity demands, its small businesses and its residents, while moving closer to the city's goal of becoming 100% renewable by 2035 and avoiding energy cost increases for the city. The city provided a guarantee of energy purchase, and the RFP gave bidders the option to use city property or private property to meet its goal, making the project low risk for investors. The contract was awarded to Creekwood Energy Partners in partnership with Hecate Energy and Generate Capital.

The Request for Proposals required:

1. Bidders to enter into a project labor agreement with the city that would set wages, healthcare and retirement benefits, and apprenticeship utilization requirements. The final project included an 80% Ohio resident requirement for employment.
2. Businesses were required to submit an "MBE/WBE Inclusion Packet" or a notarized statement committing to inclusion goals and a basic requirement of at least 4% of the contract be performed by minority business enterprises (MBE), women business enterprises (WBE), or small business enterprises (SBE), whether through the contractor, subcontractors or in partnership with them.

Current Status: The RFP resulted in a contract with the Creekwood Energy Team for the development of 100MW of solar. The project is expected to be completed and fully online in 2021.

Source: [https://cityrenewables.org/wp-content/uploads/2020/08/CRA\\_Cincinnati\\_Case-Study.pdf](https://cityrenewables.org/wp-content/uploads/2020/08/CRA_Cincinnati_Case-Study.pdf)

## Appendix B: Ohio Building Futures Model

### Ohio [Building Futures Model](#)

Quality pre-apprenticeship program

The Building Futures Program is a pre-apprenticeship program run as a partnership between Franklin County, Ohio, the Columbus/Central Ohio Building and Construction Trades Council, and the Columbus Urban league. The program runs for 12 weeks and helps individuals from low-income backgrounds overcome barriers to working in the building trades where they can be paid a good wage and receive benefits. The program includes not only the development of trade skills, but also life skills such as financial literacy. After the completion of the program, participants can join an affiliated trade which includes bricklaying, carpentry, cement masonry, drywall finishing, electricians, glaziers, and others. Participants alternate between classroom learning and on-the-job training. Graduates are also able to demonstrate they went to work every day and on time, and they take instruction well.

The program includes:

1. **Recruiting, Screening, Pre-testing.** Recruitment efforts target women, minorities, and other disadvantaged populations. The community-based organizations involved were purposely selected to help the project target women, minorities, and otherwise disadvantaged populations.
2. **Credit and Non-credit Classroom Programming,** beginning with Basic Skills Remediation (4 weeks), such as Life/Employability Skills, basic math, reading, and writing designed to prepare participants for the rigors of apprenticeship exams. Remedial training is followed by Basic Skills Development, including technical core skills, employment skills, and more math/English, and Basic Skills Enhancement (4 weeks), which includes workplace preparation, basic skills for the construction Industry, OSHA safety training, and college math.
3. Trade-specific paid internship
4. **Supplemental Services.** The vast majority of participants receive supplemental services such as transportation, child care, dependent care, emergency housing, work clothing or uniforms, licensing or testing fees, medical and healthcare supportive services, needs related payments, stipends, and case management.
5. Apprenticeship program placement for graduates

Source: <https://columbusconstruction.org/building-futures/>

## Appendix C: First-Source Hiring System

### National Model: First-Source Hiring System

#### [The “Staples” CBA](#)<sup>41</sup>

The Los Angeles Sports and Entertainment District was a \$1 billion multipurpose development project that included plazas for restaurant and retail business, a 7,000 person theater, a convention center extension, a hotel, and a permanent high rise housing complex. In May of 2001, the Figueroa Corridor Coalition for Economic Justice negotiated a community benefit agreement with the city of Los Angeles and the developer of the project, L.A. Arena Land Company and Flower Holdings, LLC. The agreement is often referred to as the “Staples” CBA due to the project’s proximity to the Staples Center sports arena, which was also built by the same developer.

Some of its notable provisions include living wage requirements, prioritizing the hiring of individuals with low incomes, affordable housing requirements, and developer-provided funding for a local hiring referral system, recreation and parking areas for local residents. The labor provisions in the Staples Agreement consist of:

- A First Source Hiring Policy considers “Targeted Job Applicants” first. In this agreement, people with low incomes residing near the project were prioritized for hiring.
- This agreement set out an aggressive goal of 50% hire of the targeted population (no penalties for failure to achieve this goal if employer made good faith efforts otherwise)
- To create a pipeline of targeted workers, the developer provided seed funding to a local non-profit to create a First Source Referral System.

Source: [Agreement](#)

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<sup>41</sup> <https://www.forworkingfamilies.org/resources/staples-cba>



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