

IN TRANSITION: STORIES FROM COAL PLANT COMMUNITIES

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ABOUT DELTA INSTITUTE

Established in 1998, Delta Institute is a Chicago-based nonprofit organization that works to build a resilient environment and economy through sustainable, market-driven solutions. Since our founding, we have engaged in community-driven redevelopment of vacant sites and brownfields, and we are a national leader in supporting coal plant communities in the transition away from coal.

We help communities plan for the closure and potential reuse of their coal plants in ways that promote environmentally sustainable and socially equitable economic development. We do this work in broad partnership with community-based organizations, environmental justice organizations, coal plant owners, electric utilities, private foundations, local government agencies, elected officials, federal agencies, and labor organizations. We have worked with coal plant communities across the country from New York to Montana.

Visit online at www.delta-institute.org.

Our coal transition work, including this document, is made possible with support from the Just Transition Fund. Learn more about their efforts at **www.justtransitionfund.org.**



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INTRODUCTION

Due to a changing energy market and mounting community pressure, coal-fired power plants are shutting down across the country. One of the tensions in the country's transition away from coal is the potentially destructive economic and social impact that coal plant closures can have on local communities. As the U.S. energy market shifts away from coal, impacted communities are making their own local changes.

Delta Institute works with cities and counties across the country as they redevelop their communities and coal plant sites and improve their environmental and economic outlook. Here, we share stories from U.S. communities in the trenches of coal transition, and the challenges and successes that can help others navigate the process. This compilation is intended to help communities by providing real examples of how sites are being repurposed, what funding sources are being used, and why comprehensive redevelopment planning is important.

These stories are drawn from a variety of sources, including media releases, environmental groups, and site owners, as well as from our own work on the ground in coal plant communities. We gathered information and data from municipal government records, the National Register of Historic Places, and local newspapers. As we value the transparency and integrity of our work, we have provided citations for all of the information we present.

Please note: the stories in this document represent a selection of coal plants from different stages in the redevelopment process and do not represent a complete listing of all redevelopment activities on coal plant properties.



ANNOUNCED CLOSURES

In our work with coal plant communities, we have learned that the redevelopment process is more efficient when there is early planning and strong community engagement. In some of the following cases, planning for closure started years in advance. In some cases, closure came without significant warning, and others, communities chose to react to the impact rather than plan for the future.

The value of early planning can be seen at the municipal level in anticipating tax losses, job losses, and indirect impacts, such as housing value decline and supply chain impacts. People who work at the power plant and in the supply chain of coal also benefit from early notification, allowing them to find other employment, seek training, or move.

The closure process can be long, sometimes characterized by the gradual shutdown of generating units and an extended staff relocation or layoff process. These examples are included to show the range of issues, actors, and processes that have occurred in communities of varying sizes for the benefit of other communities facing coal plant closure.

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ANNOUNCED CLOSURE

BRIDGEPORT HARBOR

Projected Closure Date	2019
Current Owner	Public Service Enterprise Group (PSEG)
Generating Capacity	400 megawatts (MW)
Employees	115
SO ₂ Emissions	2,044 tons/year (2007-2010)
NO _x Emissions	1,404 tons/year (2007-2010)
Funding & Assistance	PSEG to provide funds to reuse the site for a natural gas plant



BACKGROUND

Bridgeport Harbor Station, Connecticut's last coalfired plant, has been running for almost five decades.¹ As Bridgeport's third-highest taxpayer and a high sulfur dioxide and nitrogen oxide emitter,² this plant illustrates the common tension between community health concerns and economic needs. The National Association for the Advancement of Colored People (NAACP) labeled Bridgeport Harbor Station as one of the 2012 Top Environmental Justice Offenders, because of its high emissions and location in the second poorest city in Connecticut, where primarily people of color live.³

This plant has received local pressure from the Healthy CT Alliance of Bridgeport to decommission and work toward sustainable redevelopment.⁴

Bridgeport Harbor Station is located within a mile of six schools,⁵ and has been the target for closure by the Sierra Club, Connecticut Fund for the Environment, and

Conservation Law Foundation for allegedly violating the Clean Air Act. $^{\rm 6}$

STATUS

The coal plant, located on the waterfront, is currently still in service, but PSEG announced its plans to close the plant by 2019.⁷ PSEG plans to build a natural gas plant at the same site, and upon completion, will decommission the coal plant. This plan will cost \$550 million.⁸ According to a press release from Bridgeport's mayor, the conversion will create 350 construction jobs and 20 permanent jobs.

According to a local newspaper, this plant will add \$5 million to Bridgeport's tax base.⁹ An agreement between the city council, community groups, and environmental organizations has been crafted to provide \$2 million annually, directed at appointing a community liaison at PSEG, creating environmental benefits in Bridgeport, and promoting local hiring.¹⁰

1 http://www.courant.com/community/bridgeport/hc-last-ct-coal-plant-20160211-story.html

2 NAACP. "Coal Blooded: Putting Profits Before People."

3 NAACP. "Coal Blooded: Putting Profits Before People."

10 http://www.bridgeportct.gov/highlights/?FeedID=2366

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⁴ http://news.hamlethub.com/fairfield/publicsafety/42637-healthy-ct-alliance-calls-for-end-of-bridgeport-coal-plant

⁵ NAACP. "Coal Blooded: Putting Profits Before People."

⁶ http://www.ctpost.com/local/article/Environmental-groups-sue-seeking-shutdown-of-Bpt-4187120.php

⁷ https://www.pseg.com/family/power/fossil/stations/connecticut/bridgeport-harbor-cc-project.jsp

⁸ https://www.pseg.com/info/media/newsreleases/2016/2016-02-11.jsp#.WYdo6ljytPY

⁹ http://www.courant.com/community/bridgeport/hc-last-ct-coal-plant-20160211-story.html

KENTUCKY

ELMER SMITH

Projected Closure Date	2022 - 2023
Current Owner	City Of Owensboro
Generating Capacity	425 MW
Employees	85
SO ₂ Emissions	5,741 tons in 2014
NO _x Emissions	7,347 tons in 2014
Funding & Assistance	Unknown



BACKGROUND

The Elmer Smith plant serves and is run by the City of Owensboro. The City of Owensboro announced it would close the plant in March 2017, after deliberating the decision for years. Unit 1's closure had already been announced prior to this decision, with Owensboro Municipal Utilities (OMU) CEO Terrance Naulty, citing the closure as a "pure economic decision." The Sierra Club identified this plant as one of the dirtiest carbon emitters per megawatt hour in their 2007 Environmental Integrity Project.¹

STATUS

The announcement came after OMU realized it would need to spend \$37 million on upgrades to comply with federal regulations. OMU had previously begun to burn tires for fuel at this facility, following a \$454,276 capital equipment investment from the State of Kentucky.² The best option financially, according to OMU, would be to buy power from a proposed natural gas plant in nearby Henderson County.

During this consideration process, OMU employees conducted a study which recommended closing Elmer Smith by 2023 and transitioning to natural gas. The study also discussed building out their own natural gas capacity.³

OMU commissioned another outside study which, according to the chairman of the City Utility Board, "made it even more apparent that we need to stop burning coal."⁴ The Institute for Energy Economics and Financial Analysis (IEEFA) has conducted their own study, which favors OMU not making significant investments into natural gas, but rather analyzing the costs and benefits of renewables, and buying from the wholesale market in the meantime.⁵

OMU announced a tentative decommission date of 2022 and 2023. OMU also stated their intent to move to natural gas, but has yet to release details.⁶

⁶ http://www.messenger-inquirer.com/news/local/omu-will-stop-burning-coal-by/article_ca1b2aaa-e371-514f-ac29-05496184122d.html



¹ http://content.sierraclub.org/press-releases/2017/03/owensboro-municipal-utility-announces-elmer-smith-retirement

² http://waste.ky.gov/Waste%20Tire%20Program%20Report/Waste%20Tire%20Program%20Report%20for%202013.pdf

³ Vied, Steve. Messenger Inquirer. "OMU taking more time on coal decision". 2017.

⁴ http://wkms.org/post/half-owensboro-s-coal-fired-power-plant-will-retire-2021

⁵ http://ieefa.org/wp-content/uploads/2016/07/OMU-Memorandum.pdf

RIVER ROUGE

Projected Closure Date	2023
Current Owner	DTE Energy Co.
Generating Capacity	651 MW
Employees	110
SO ₂ Emissions	9,723 tons in 2014
NO _x Emissions	3,669 tons in 2014
Funding & Assistance	Economic Develoment Adminisration (EDA) provided funding for economic planning and and DTE provided match



BACKGROUND

DTE's River Rouge plant opened in 1957 with two generating units of 260 MW each, the largest in the world at the time.¹ The River Rouge plant is another example of a coal plant site subject to both economic and environmental concerns as it reaches closure.

This plant was named as one of the 2012 Top Environmental Justice Offenders by the NAACP, in an effort to label plants that disproportionately affect low-income people of color.² This plant was cited as an offender in part because of its sulfur dioxide and nitrogen oxides emissions, 14,614 tons and 4,861 tons per year respectively.

STATUS

In 2016, DTE announced plans to close this plant by 2023 aspartofan effort to modernize their energy production.³ River Rouge's mayor expressed concern about the indirect economic impact of closure on his community.⁴ River Rouge is an industrial suburb near Detroit with a median income of \$13,037, just 59% of the state average.

Delta Institute assisted the Downriver Community Conference to apply for and receive funding from the US Economic Development Administration (EDA) for economic planning assistance. Five downriver communities are participating in this grant-funded work (River Rouge, Riverview, Ecorse, Trenton, Wyandotte). DTE contributed \$ 50,000 toward EDA grant match money.



¹ http://newsroom.dteenergy.com/index.php?s=26810#sthash.IMbbZkLD.dpbs

² http://www.naacp.org/wp-content/uploads/2016/04/CoalBlooded.pdf

³ http://newsroom.dteenergy.com/index.php?s=26817&item=137044#sthash.WJClbhD0.dpbs

⁴ http://2016annualreport.delta-institute.org/wp-content/uploads/2016/12/Delta-Institute_2016-Annual-Report_ONLINE.pdf

ANNOUNCED CLOSURE

TRENTON CHANNEL

Projected Closure Date	2020-2023
Current Owner	DTE Energy Co.
Generating Capacity	536 MW
Employees	110
SO ₂ Emissions	15,513 tons in 2014
NO _x Emissions	3,107 tons in 2014
Funding & Assistance	Economic Development Admnistration (EDA) provided funding for economic planning and DTE provided match



BACKGROUND

Trenton Channel is uniquely located on a small island in the Detroit River. The plant became operational in 1924 and was the first plant in the U.S. to use electrostatic scrubbers to decrease fly ash releases to the environment.^{1,2} Fly ash is a coal combustion product that primarily consists of silica.³ Trenton Channel, due to its effort to preserve surrounding habitat, won the Wildlife Habitat Council's Corporate Habitat of the Year Award in 2004.⁴

STATUS

This plant is now experiencing a gradual shutdown. DTE closed two of the remaining three units of Trenton Channel in 2015 and 2016, and has plans for full retirement by 2023. DTE stated that there would be no layoffs associated with the first two units' closure, partially delaying the employment loss in Trenton. Trenton Channel is the city's largest tax payer.⁵

Concern over changes in tax base is a common economic issue for coal communities in transition. Delta assisted Trenton in applying for EDA funds as part of the Downriver Community Conference to support an economic recovery strategy as the city planned for coal plant closure.

The funds will be used to help Trenton and four other downriver communities write a plan to diversify their economy, connect residents with employment opportunities, and plan for the impacts of a shrinking industrial presence. DTE contributed \$50,000 as match money to the EDA grant. Trenton was a partner in the EDA funded grant to the Downriver Community Conference.

2 https://babel.hathitrust.org/cgi/pt?id=mdp.39015023185914;view=1up;seq=286

4 DTE Energy. 'Wildlife Habitat Council'



¹ http://www.trentontrib.com/dte-confirms-phase-out-of-trenton-plant.html

³ https://www.epa.gov/coalash/frequent-questions-about-coal-ash-disposal-rule

⁵ http://www.thenewsherald.com/news/two-units-of-dte-energy-s-trenton-channel-power-plant/article_a0164588-323e-5c64-900a-b9c8a8379437.html

PRESQUE ISLE

Projected Closure Date	2020
Current Owner	Wisconsin Electric (WE Energies)
Generating Capacity	431 MW
Employees	100
SO ₂ Emissions	6,306 tons in 2014
NO _x Emissions	3,764 tons in 2014
Funding & Assistance	Unknown



BACKGROUND

Located in Michigan's Upper Peninsula (UP), on Lake Superior, the Presque Isle Power Plant is in the process of shutting down. Units 1 through 4 of this site were decommissioned between 2006 and 2009, and the remainder are set to close by 2020.¹ This staggered shut down is representative of many paths to closure.

WE Energies was originally able to continue operating this coal-fired plant under a System Support Resource Agreement with Midcontinent Independent System Operator (MISO), which allocated monthly funds for plant operation and pollution upgrades.²

After closure was set, elected officials began to plan what the next phase of energy generation would look like in the UP. In 2014, the local state representative recommended natural gas, renewables, and localized distribution,

over proposed transmission lines from Wisconsin.³ In the end, WE Energies chose closure and support for natural gas.

STATUS

In 2016, WE Energies' parent company WEC Energy Group and Cliffs Natural Resources, operators of an iron ore mines in Michigan and Minnesota, reached an agreement that would replace the loss of energy from closure. Two natural gas engine power plants will be built in the U.P. to replace the Presque Isle Power Plant by 2020. About 100 employees currently work at the plant, 40 of whom will not be at retirement age by closure.^{4,5} At the time of publishing, a plan for meeting the UP's energy needs had not been finalized.

5 http://archive.jsonline.com/business/we-energies-agrees-to-sell-upper-peninsula-power-plant-b99425164z1-288420201.html



¹ https://www.eia.gov/electricity/data/eia860m/

² http://midwestenergynews.com/2014/10/06/michigans-u-p-goes-head-to-head-with-its-energy-future/

³ http://midwestenergynews.com/2014/10/06/michigans-u-p-goes-head-to-head-with-its-energy-future/

⁴ http://www.4-traders.com/CLIFFS-NATURAL-RESOURCES-12094/news/Cliffs-Natural-Resources-Two-natural-gas-powerplants-to-replace-Presque-Isle-Power-Plant-22927143/

ANNOUNCED CLOSURE

OHIO

R.B. KILLEN AND J.M. STUART

	R.B. Killen	J.M. Stuart
Projected Closure Date	2018	
Current Owner	Dayton Power & Light C	o. and Dynegy Energy
Generating Capacity	660 MW	2,400 MW
Employees	110	380
SO ₂ Emissions	13,096 tons in 2014	10,852 tons in 2014
NO _x Emissions	7,111 tons in 2014	7,117 tons in 2014
Funding & Assistance	EDA grant funds	



J.M. Stuart

BACKGROUND

The Killen and Stuart generating stations are both located in Adams County, Ohio, and operated by Dayton Power and Light (DP&L). The plants occupy a total of seven miles of Ohio riverfront, and DP&L owns 5,500 acres in total between the two plants in Adams County.¹ The Stuart plant has nine coal ash ponds and two landfills. The Killen station has 4 coal ash ponds, two of them unlined. These unlined sites may pose more risk considering the sites are immediately adjacent to the Ohio river and the drinking water supply for the community. Past research has indicated that unlined sites may pose increased risk to human health and the environment.² All are immediately adjacent to the Ohio river and the drinking water supply for the community. Taxes from Killen and Stuart site owners represent 32% of the county's general fund, 51% of the Machester Local School Districts funds.³

The large 2,400MW Stuart plant ranks 11th in the nation for surface impoundments, where the waste from coal combustion is stored, generating 2.5 million pounds of surface impoundment releases in 2006.⁴ OSHA found violations at the Stuart Generating Station, and in January 2017, six people were injured at this plant after an explosion.⁵

According to a local newspaper, People's Defender, the stations provide 200 direct and indirect jobs in Adams County. 6

STATUS

DP&L announced the closure of both plants in 2017, with the potential for DP&L to invest in solar along with this closure.⁷ DP&L stated the stations would not be economically viable after 2018 and marked June 2018 as the closure dates for both facilities. DP&L has not yet announced what they plan to do with the facilities after closure. Local officials are already planning ahead, Charles Shreve, Superintedent of a local school district, is speaking with legistators in Columbus on budget loss and Adams County commissioner Ty Pell is planning for job loss and retraining.⁸ The Voinovich School at Ohio University, collaborating with Adams County Economic and Community Development, will be using EDA grant funds to analyze how these closures will affect the community and the regional economy and identify jobs for those who currently work at the plants.⁹

- 5 http://www.wcpo.com/news/local-news/adams-county/5-hurt-in-adams-county-power-station-explosion
- 6 http://www.peoplesdefender.com/2016/12/02/dpl-considers-closing-power-generating-plants-in-county/

- 8 http://www.wcpo.com/news/local-news/adams-county/adams-county-locals-prepare-for-hundreds-to-lose-jobs-in-power-plant-closings
- 9 http://www.publicnow.com/view/1B2210D1FC990CFCBC9F1419DDBC78EE3C109FB7?2017-05-20-07:01:15+01:00-xxx6378

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¹ http://www.wcpo.com/news/local-news/adams-county/adams-county-locals-prepare-for-hundreds-to-lose-jobs-in-power-plant-closings

² https://www.kftc.org/sites/default/files/docs/resources/epa-coal-combustion-waste-risk-assessment.pdf

³ Report Generated by David Gifford, Adams County Auditor

⁴ https://www.facingsouth.org/2009/01/coals-ticking-timebomb-could-disaster-strike-a-coal-ash-dump-near-you.html

⁷ http://content.sierraclub.org/press-releases/2017/01/dpl-agrees-invest-clean-energy-signaling-agreement-retire-stuart-and-killen

TRANSITIONAL SITES

The time period between plant decommissioning and site redevelopment can be lengthy and depends on existing contamination, stakeholder collaboration, site ownership, and available resources. The planning process may involve the utility, local government, and citizens, as well as labor, philanthropic, environmental, and civic organizations. Examining sites in transition helps to understand the steps in the redevelopment process both for the site and the community as a whole from announcement of closure to a redeveloped site. Sites in this section are categorized by their current status: Closed, Remediation, Planning, or Redevelopment.

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ALABAMA

TRANSITIONAL

WIDOWS CREEK

Status	Planning
Closure Date:	2015
Current Owner:	TVA
Employees at Time of Closure	90
Proposed End Use	Google global data center
Projected Redevelopment Cost	\$600 million
Redevelopment Funder	Google



BACKGROUND

In June 2015, Google announced plans to build its 14th global data center at the former home of the Tennessee Valley Authority (TVA)-owned Widows Creek Coal Power Plant located in Jackson County, Alabama. One of TVA's largest plants, Widows Creek released 1.8 million pounds in surface impoundments in 2006.¹ TVA was required to either update or close this plant as a result of a compliance agreement with the US EPA, after a lawsuit arguing TVA had "failed to install required pollution controls when it made modifications to its plants."^{2,3}

STATUS

Google's data center will be powered by 100% renewable energy and is estimated to create 75 to 100 jobs. The 360-acre site is an example of an adaptive reuse of a portion of the site. The site's infrastructure and location, particularly its water supply and transmission lines, make it well positioned for cooling and data connections for the new center. According to the Times Free Press, Alabama's elected officials were intent on bringing in a major data center, and Google will receive significant investment credit and tax abatements.⁴ TVA plans to beigin demolition in late 2017, and the surface impoundments storing coal ash will be closed off at the site, not removed.^{5,6,7}



¹ https://www.facingsouth.org/2009/01/coals-ticking-timebomb-could-disaster-strike-a-coal-ash-dump-near-you.html

² https://www.epa.gov/sites/production/files/documents/tva-ffca.pdf

³ https://www.facingsouth.org/2011/07/landmark-tva-pollution-settlement-will-help-the-south-breathe-easier.html

http://www.timesfreepress.com/news/local/story/2015/jun/25/goodbye-coal-plant-hello-google-google-plans/311380/
http://www.datacenterknowledge.com/archives/2016/11/22/googles-alabama-power-plant-conversion-project-may-

off-schedule/
http://www.alternet.org/environment/google-convert-coal-power-plant-data-center-powered-100-renewable-energy

http://www.utilitydive.com/news/google-to-build-data-center-on-site-of-retired-coal-plant-power-it-with-re/401383/

ALABAMA

TRANSITIONAL

COLBERT Tuscumbia, AL

Status	Closed
Closure Date:	2016
Current Owner:	TVA
Employees at Time of Closure	Unknown
Proposed End Use	None
Projected Redevelopment Cost	\$10 million
Redevelopment Funder	TVA



BACKGROUND

Colbert Power Plant, run by TVA, ended its service on March 23, 2016 after 61 years of operation. The plant had a capacity of 1,000 MW.¹

According to TVA, after reviewing new regulations for mercury and air toxins, the company decided against installing pollution controls, citing that retiring the plant was more cost effective.² However, the US EPA had previously issued an administrative compliance order alleging that TVA had updated some of its plants without adhering to pollution control regulations. The compliance agreement between the two parties stated the TVA must install proper pollution controls to Colbert, or shut down.³ TVA employees were offered positions at other TVA fossil fuel plants.⁴

STATUS

TVA closed Colbert, its last coal-fired facility in Alabama, in 2016. TVA announced plans to tear down the plant later that year,⁵ and redevelopment plans have yet to be decided. In April 2017, TVA began capping the last coal ash impoundment at the site. According to Times Daily, TVA decided not to move the coal ash away from the river site, which environmental groups spoke out against, citing that the unlined impoundment's location along waterfront as an environmental risk.⁶



¹ https://www.tva.com/Energy/Our-Power-System/Coal/Gone-But-Not-Forgotten

² https://www.tva.gov/Newsroom/Colbert-Fossil-Plant-Ends-61-Years-of-Electrical-Generation

³ https://www.epa.gov/sites/production/files/documents/tva-ffca.pdf

⁴ http://www.timesdaily.com/news/tva-begins-capping-wet-ash-pond-at-colbert-fossil-plant/article_0983c3bc-bca4-5b5bb5f2-4eaa1816e677.html

⁵ http://whnt.com/2016/11/17/tva-makes-surprising-announcement-about-colbert-fossil-plant/

⁶ http://www.timesdaily.com/news/tva-begins-capping-wet-ash-pond-at-colbert-fossil-plant/article_0983c3bc-bca4-5b5bb5f2-4eaa1816e677.html

ILLINOIS

CRAWFORD & FISK

Status	Planning
Closure Date:	2012
Current Owner:	NRG
Employees at Time of Closure	150
Proposed End Use	None
Assistance Funds	Unknown
Assistance Funder	Unknown



BACKGROUND

These two plants, once operated by Midwest Generation, are located on Chicago's west side among a densely populated residential area. Fisk and Crawford, built in 1903 and 1925 respectively, had a combined generation capacity of 868 MW.¹

For many years, local grassroots campaigns and national environmental organizations had led public campaigns to put pressure on Midwest Generation, concerned about the health impacts of pollution in the surrounding Little Village and Pilsen neighborhoods. The Fisk and Crawford plants closed in 2012 after Midwest Generation decided not to invest in pollution abatement upgrades. Forty employees retired with severance packages negotiated by their union, 15 employees were laid off, and 95 employees were transferred to other plants.²

In an effort to address the future uses of the sites, the Mayor of Chicago appointed a task force to develop guiding principles for the redevelopment of the sites. Delta Institute acted as the facilitator³ during this process. This task force included site owner NRG, ComEd, the distribution utility, community organizers, organized labor, two aldermen, and the City's Department of Housing and Economic Development. These stakeholders were able to engage with the public and ultimately stated prioritizing living wage jobs and building a healthy community among the guiding principlesthat emerged from this process.⁴

STATUS

In 2015, a plan was proposed to use the Fisk plant as a Chicago Transit Authority bus garage, park, and nature walk. NRG, the current owner, and CTA, explored the site's potential. The City of Chicago and CTA received an Economic Development Adminsitration grant to pursue site redevelopment planning, but this effort was later scrapped as City budget priorities changed. No future plans for the Crawford site have been determined.

⁴ http://delta-institute.org/delta/wp-content/uploads/Fisk_Crawford_Reuse_Task_Force_Sept-2012.pdf



¹ http://delta-institute.org/delta/wp-content/uploads/Fisk_Crawford_Reuse_Task_Force_Sept-2012.

² http://articles.chicagotribune.com/2012-08-30/business/chi-closure-of-chicagos-crawford-fisk-electric-plants-ends-coal-

era-20120830_1_fisk-and-crawford-midwest-generation-coal-plants

³ http://policyintegrity.org/documents/POGGEPanel5_2014.pdf

INDIANA

STATE LINE POWER

Status	Remediating
Closure Date:	2012
Current Owner:	Sam Townline Development
Employees at Time of Closure	≈100
Proposed End Use	None
Assistance Funds	\$9.8 million
Assistance Funder	Dominion Resources



BACKGROUND

The State Line Plant was built in the 1920s along Lake Michigan and had a generating capacity of 515 MW. The NAACP ranked State Line as 5th on their list of Environmental Justice Offenders, with 10,326 and 7,885 tons of SO₂ and NO_x respectively emitted on average per year.¹ As a result of increased environmental regulations and decreasing profits, its owner Dominion Resources decided to decommission the plant in 2010, completing the process in June 2012.

Dominion then sold the site to Texas-based demolition company BTU Solutions. Dominion paid \$3.4 million for a civil penalty and provided an additional \$9.8 million for remediation. Both Dominion and BTU were evasive on community engagement around the future uses of the site while the National Resources Defense Council and the Environmental Law and Policy Center actively advocated for independent evaluations and community involvement.

While remediation was still underway, BTU Solutions sold a large portion of the site to Sam Townline Development, Inc., a development company whose owners also possess a petcoke storage facility in Indiana.

STATUS

State Line has been demolished, but Sam Townline has yet to announce a redevelopment plan for the site. Community members are concerned the site may be used to store petcoke now, a form of refinery waste.^{2,3}



¹ NAACP."Coal Blooded: Putting Profits Before People."

² http://www.chicagotribune.com/business/ct-state-line-demolished-1130-biz--20141126-story.html

³ http://www.nwitimes.com/business/local/new-owner-buys-hammond-s-shuttered-state-line-energy-plant/article_e8d2157ce9d1-5dff-80ec-63e8cc816f96.html

MASSACHUSETTS

TRANSITIONAL

MONTAUP STATION

Status	Planning
Closure Date:	2010
Current Owner:	Somerset Riverside 1606 LLC and National Grid
Employees at Time of Closure	40
Proposed End Use	Cargo port or green energy hub
Assistance Funds	\$1 million
Assistance Funder	Commonwealth of Massachusetts



BACKGROUND

Montaup Station is located in Somerset, MA on the Taunton River. The coal pant began operation in 1959. The plant closed in 2010 and Somerset received \$1 million in state funds to assist in the Montaup closure.¹

Massachusetts Clean Energy Center (MassCEC) did a reuse study of this site, along with another local coal plant, Brayton Point. Through engaging with the community and experts, MassCEC developed reuse options. MassCEC outlined principles to guide reuse ideas, including favoring a "sustainable tax base" and "improving quality of life," through lowering air and noise pollution. The sites remaining contamination limits reuse options. Montaup also falls within at State Designated Port Area, meaning reuse options should target water-dependent uses.

MassCEC proposed three two redevelopment options for Montaup, a cargo port or green energy hub, both of which include a two-acre park.²

STATUS

The current owners have not opted to carryout MassCEC plants currently. Montaup was purchased by Somerset Riverside LLC, which later sold half the site to National Grid, an energy company active both in the U.S. and the UK.³ National Grid has discussed plans to rebuild the substation here.⁴ A small portion the Montaup site is now home to a car shipping business.⁵



¹ http://www.heraldnews.com/news/20160621/somerset-secures-3-million-to-offset-lost-power-plant-revenue

² Massachusetts Clean Energy Center, Ninigret Partners. 2015. "SOMERSET POWER PLANTS REUSE STUDY." http://files.masscec. com/research/SomersetReuseStudy.pdf.

³ http://www.providencejournal.com/news/20160415/iconic-downtown-providence-buildings-sell-for-23-million

⁴ http://www.masspoliticalnews.com/article/20150609/NEWS/150606077

⁵ http://www.heraldnews.com/news/20160729/cars-are-piling-up-at-old-somerset-power-station-but-no-ones-sure-when-theyll-leave

MASSACHUSETTS

TRANSITIONAL

BRAYTON POINT STATION

Status	Closed
Closure Date:	2017
Current Owner:	Dynegy Inc.
Employees at Time of Closure	≈150
Proposed End Use	Natural gas, green energy hub or industrial site
Assistance Funds	\$6 million in Regional Greenhouse Gas Initiative funds
Assistance Funder	Massachusetts Department of Energy Resources



BACKGROUND

Brayton Point is located in Somerset, MA. Brayton Point is the largest coal-fired plant in New England,¹ created nearly half a million pounds of surface impoundment releases in 2006,² and is also Somerset's largest taxpayer.³

Massachusetts Clean Energy Center (MassCEC) did a reuse study this site and another local coal plant, Montuap Station. Through engaging with the community and experts, MassCEC developed reuse options. MassCEC outlined principles to guide reuse ideas, including favoring a "sustainable tax base" and "improving quality of life," through lowering air and noise pollution. The sites remaining contamination limits re-use options. Brayton Point also falls within at State Designated Port Area, meaning reuse options should target water-dependent uses. MassCEC proposed three site redevelopment options for Brayton Point: 1) natural gas conversion; 2) a "green energy hub" that includes solar, offshore wind, and anaerobic digesters; and 3) a combination of clean energy and marine-industrial uses.

STATUS

Brayton closed in this year and redevelopment has not begun.⁴ The Massachusetts Department of Energy Resources has provided at least two payments of \$3 million dollars in Regional Greenhouse Gas Initiative funds to the community as they deal with this closure.



¹ http://www.heraldnews.com/news/20160729/cars-are-piling-up-at-old-somerset-power-station-but-no-ones-sure-whentheyll-leave

² https://www.facingsouth.org/2009/01/coals-ticking-timebomb-could-disaster-strike-a-coal-ash-dump-near-you.html

³ http://www.heraldnews.com/news/20170106/death-of-brayton-point-leaves-uncertain-tax-picture-in-somerset

⁴ http://www.wbur.org/bostonomix/2017/05/31/brayton-power-plant-somerset

TRANSITIONAL

B.C. COBB

Status	Planning
Closure Date:	2016
Current Owner:	Consumers Energy
Employees at Time of Closure	65
Proposed End Use	Expanded deep water port
Closure Cost	\$22 million
Closure Funder	Consumers Energy



BACKGROUND

After over 67 years of operation, the B.C. Cobb Plant in Muskegon, Michigan closed its doors in 2016. The site was named after Bernard Capen Cobb, the company president from 1915 to 1934.¹ Located on Muskegon Lake,² this site was one of Muskegon's highest property tax payers. Consumers Energy disputed property tax assessments leading up to closure, arguing that three units had been taken out of operation and therefore did not have value. This was a hit to Muskegon, but Tim Paul, Muskegon Finance Director at the time, said they had controlled for this loss in budget.³ The site's closure and subsequent ceasetion of freighter activity could impact other port shipping operations in the area, since the US Army Corps of Engineers only upkeeps deep-water channels that reach a certain threshold of activity.⁴

After the closure was announced, the Consumers Energy-owned plant opened for a public tour which had not been available since the late 1990s. According to a Michigan newspaper, more than 300 people toured the facility, and Muskegon residents expressed feelings of nostalgia around this local landmark's closure.⁵ Consumers Energy retired the plant, along with units at two of their other oldest coal-fired plants in Michigan, in an effort to transition to clean energy sources.⁶ The remaining 65 employees were to retire or move to another plant.⁷

STATUS

Forsite Development Inc. plans to take ownership of the plant and demolish it, but the sale must be approved by Michigan Public Service Commission first.⁸ According to MLive Media, Consumers Energy already spent \$22 million to shut down the plant and intends to pay Forsite \$1 million to take ownership of the site.

Consumers Energy's recommended end uses for the site include: an expanded deep water port, an agribusiness center, and a sustainable manufacturing center.⁹ Forsite's current plan is to create the expanded deep water port, capitalizing on the site's existing 1,000 foot dock.¹⁰ This could help mitigate the indirect economic effects of closure.

- 1 https://old.consumersenergy.com/News.aspx?id=8289&year=2015
- 2 http://www.mlive.com/news/muskegon/index.ssf/2016/01/with_shutdown_looming_muskegon.html
- 3 http://www.mlive.com/news/muskegon/index.ssf/2012/08/city_of_muskegon_consumers_ene.html
- 4 http://wmsrdc.org/wp-content/uploads/2016/01/Port-of-Muskegon-Economic-Impact-Study.pdf
- 5 mlive.com/news/muskegon/index.ssf/2016/01/with_shutdown_looming_muskegon.html
- 6 https://new.consumersenergy.com/company/7-coal-plants-retire
- 7 http://woodtv.com/2016/04/16/b-c-cobb-power-plant-shuts-down-for-final-time/
- 8 http://www.mlive.com/news/muskegon/index.ssf/2017/03/consumers_energy_has_buyer_for.html
- 9 http://www.mlive.com/news/muskegon/index.ssf/2017/04/consumers_energy_is_paying_to.html
- 10 http://www.forsiteinc.com/april-7-2017-consumers-energys-b-c-cobb-has-buyer-is-slated-for-demolition/



ALABAMA

J.R. WHITING

Status	Planning
Closure Date:	2016
Current Owner:	Consumers Energy
Employees at Time of Closure	70
Proposed End Use	Rail-to-truck terminal and distribution center
Redevelopment Cost	Unknown
Redevelopment Funder	Forsite Development Inc.



BACKGROUND

Located on Lake Erie in the small town of Luna Pier, J.R. Whiting was Consumers Energy's smallest generating station and also its oldest. The plant began generating power in 1952 and cost \$80 million to construct. In 2014, the plant contributed \$723,260 in property taxes, according to company representatives.¹ At the time of closure in 2016, J.R. Whiting employed 70 people.²

According to Consumers Energy officials, the plant closed due to new emissions standards and its old infrastructure. Consumers Energy worked through the closing process with Monroe County Business Development Corp., who helped facilitate conversations among stakeholders.³

Consumers Energy also hired a consulting firm, AMEC Foster Wheeler, to help determine reuse options, and they proposed a wildlife preserve and soybean processing facility as the best end use for the site.⁴

STATUS

As of August 2017, the structure still stands, but Consumers is working toward an agreement with Forsite Development Inc., an industrial real estate development company, who will reportedly remove the structure within two years. Forsite plans to take advantage of the site's proximity to a highway by converting it into a rail-to-truck terminal and distribution center.^{5,6,7}

- 1 http://www.toledoblade.com/business/2016/04/08/Coal-fired-plant-in-Monroe-Co-closes-next-week.html
- 2 http://www.michigan.gov/documents/deq/Consumers_JR_Whiting_Snapshot_430263_7.pdf
- 3 http://monroecountybdc.org/jr-whiting-end-era/
- 4 http://www.monroenews.com/news/20160410/closing-whiting
- 5 http://www.monroenews.com/news/20170104/consumers-energy-looks-to-drop-former-plant-site
- 6 http://www.mlive.com/news/muskegon/index.ssf/2017/03/consumers_energy_has_buyer_for.html
- 7 http://www.forsiteinc.com/may-25-2017-speaker-says-whiting-site-development-can-boost-luna-pier-region/



TRANSITIONAL

IIGHTY MARYSVILLE Marysville, MI

Status	Planning
Closure Date:	2011
Current Owner:	Commercial Development Company
Employees at Time of Closure	250
Proposed End Use	Marina
Clean up Cost	Unknown
Cleanup Planning Funder	EPA Brownfields Assessment Grant



BACKGROUND

The Mighty Marysville, located on the St. Clair River, began operation in 1922 and was decommissioned in 2011.¹ DTE Energy sold the site to Commercial Development Company in 2014.

Cleanupplanning for this 30-acresite was funded thorugh an EPA Brownfields Assessment Grant awarded to the St. Clair County Redevelopment Authority. According to Envirologic, who helped with the remediation process, the site had a complex set of issues, including coal ash storage, fill that contained industrial debris, leaking underground storage tanks, and ash slurry disposal.²

In October 2015, the City of Marysville and Commercial Development Company announced their plan to redevelop the site. The redevelopment project is intended to improve waterfront views and access.³ After environmental remediation and site demolition is

complete, the concept includes a new public marina, and riverfront promenade, including office and retail space and a fitness center.4

STATUS

Commercial Development Company is carrying environmental remediation and horizontal out development to prepare the site for the Marysville Riverfront Master Plan.⁵ The City of Marysville and Commericial Development Company are both looking for developers.⁶ The site was imploded in 2015 and is yet to be redeveloped.^{7,8,9,10}

- 1 http://www.pennenergy.com/articles/pennenergy/2014/05/dte-energy-sells-historic-marysville-coal-fired-power-plant.html
- 2 http://www.envirologic.com/former-dte-power-plant-greenwood-oil-terminal
- 3 http://www.bluewater.org/main/News?PageItemID=552&Content=News%20Detail
- Commercial Development Company. "City of Marysville Unveils Robust Waterfront Redevelopment Concept" October 2015. 4 5 http://www.prnewswire.com/news-releases/dte-energy-sells-historic-marysville-power-plant-to-commercial-develop ment-company-235608471.html
- 6 http://www.thetimesherald.com/story/news/local/marysville/2016/07/12/marysville-dte-cleanup-stalled/86765564/
- http://revitalizationnews.com/article/implosion-of-coal-fired-power-plant-prepares-way-for-waterfront-revitalization/ 7
- 8 http://www.cityofmarysvillemi.com/wp-content/uploads/2015/10/PRESS-RELEASE-City-of-Marysville-Unveils-Robust-Rede velopment-Concept-for-Former-DTE-Energy-Power-Plant.pdf
- http://www.elkharttruth.com/news/michigan/2015/10/20/Maryville-officials-unveil-plans-for-former-power-plant-site.html 9
- Commercial Development Company. "City of Marysville Unveils Robust Waterfront Redevelopment Concept" October 2015. 10



NEVADA

REID GARDNER

Status	Closed
Closure Date:	2017
Current Owner:	NV Energy
Employees at Time of Closure	40
Proposed End Use	None
Closure Cost	Unknown
Closure Funder	Unknown



BACKGROUND

Reid Gardner is located in Southern Nevada, 40 miles outside of Las Vegas. The plant, now operated by Nevada Power Co., was built along the Muddy River, next to the Moapa River Reservation. The four-unit plant had a capacity of 600MW and began generation in 1965.

The Moapa Band of Paiutes filed several lawsuits calling for the closure and cleanup of this plant, stating that the plant caused adverse health effects and water pollution. The Sierra Club also joined this legal battle. At the same time, the Senate passed a bill calling for retirement of 800 MW of coal fired energy by NV Energy.¹

Three units closed in 2014, and the final unit closed in March 2017. According to a NV Energy press release, the majority of the 40 employees left at Reid Gardner will be transferred to other facilities.²

NV Energy is replacing Reid Gardner's generating capacity with natural gas and renewables.^{3,4}

STATUS

The Moapa River Reservation received \$4 million in a settlement to aid with the health impacts of pollution from Reid Gardner. The money will be used for: a health center, air monitoring, water rights purchasing, and technical assistance to help with clean-up. Right after the coal plant closed the Moapa Southern Paiute Solar Project launched, which was led by the Moapa Band of Paiutes, and created 115 constructiuon jobs on a site nearby.⁵ According to NV Energy officials, the Reid Gardner site may be a good site for solar as well.^{6,7,8,9}

⁹ http://www.tulalipnews.com/wp/tag/moapa-band-of-paiutes/



¹ http://www.utilitydive.com/news/what-the-e3-study-of-nevada-net-energy-metering-really-says/285922/

² http://mesquitelocalnews.com/2017/03/reid-gardner-generating-station-shut/

³ http://ieefa.org/nevada-coal/

http://www.bizjournals.com/buffalo/blog/morning_roundup/2016/03/nrg-energy-officially-retires-tonawanda-huntley.html
http://www.colorlines.com/articles/how-one-small-tribe-beat-coal-and-built-solar-plant

⁶ https://www.reviewjournal.com/business/energy/moapa-power-plant-ceases-operations-after-52-years/

⁷ http://www.utilitydive.com/news/nv-energy-shutters-final-unit-at-reid-gardner-coal-plant/438330/

⁸ http://www.utilitydive.com/news/nv-energy-agrees-to-43-million-settlement-related-to-nevada-coal-plant/403308/

NEW YORK

TRANSITIONAL

UNTLEY GENERATING STATION Tonawanda, NY

Status	Planning
Closure Date:	2016
Current Owner:	NRG
Employees at Time of Closure	79
Proposed End Use	None
Economic Planning Funds	\$160,000
Economic Planning Funder	EDA



BACKGROUND

The Huntley Generating Station, now over a half a century old, is located along the Niagara River in Tonawanda, NY. The plant originally had six units and just over 800MW of generating capacity, but began a staggered closure of units in 2005. The closure of the final two units. 218MW each, was announced in 2015. Seventy-nine people were employed at the plant at the time. All former emplyees either retired or were transferred to other facilities.

NRG cited unfavorable market conditions as the reason for closure. A report from the Institute of Energy Economics and Financial Analysis stated the plant was unlikely to be financially viable due to low natural gas prices, flat power demand, and coal prices that were uncompetitive. The report also stated that Huntley was operating at a \$1,000,000 loss on average between 2009 and 2012.¹ The plant contributed over \$6 million in tax

Clean Air Coalition of Western New York spearheaded a campaigntohelpthecommunityadjusttoplantclosureand created a collaboration of unions, government agencies, and community members, ultimately winning passage of a new law that would backfill tax losses and protect jobs during a 7-year phase in period. New York State's Electric Generation Facility Cessation Mitigation Fund³ provided funds to help replace this loss in tax revenue.^{4,5,6,7}

STATUS

The Research Foundation of State University of New York received a grant from the U.S. Economic Development Administration to aid Tonawanda in planning for the economic loss.8 Delta Institute provided technical assistance throughout a comprehensive planning process that produced Tonawanda Tomorrow, a document with a clear blueprint for implementing positive change with a strong focus on future growth in the community.

revenue.2

- 2 http://buffalonews.com/2017/01/25/tonawanda-tomorrow-plans-future-without-huntley-station-power-plant/
- 3 https://esd.ny.gov/electric-generation-facility-cessation-mitigation-program
- 4 http://www.investigativepost.org/2015/08/25/nrg-to-retire-huntley-coal-plant-in-tonawanda/
- 5 http://buffalonews.com/2015/12/22/nrg-to-start-huntley-layoffs-in-march/
- 6 http://www.bizjournals.com/buffalo/blog/morning_roundup/2016/03/nrg-energy-officially-retires-tonawanda-huntley.html
- 7 http://buffalonews.com/2017/04/06/state-budget-includes-additional-funds-communities-hit-hard-huntley-closure/
- 8 https://www.eda.gov/archives/2016/news/press-releases/2016/07/22/tonawanda.htm



¹ http://ieefa.org/report-huntley-generating-station-coal-plants-weak-financial-outlook-calls-for-corporate-and-communi ty-leadership/

LAKE SHORE

Status	Remediating
Closure Date:	2015
Current Owner:	NV Energy
Employees at Time of Closure	42
Proposed End Use	None
Demolition Cost	\$15 million
Demolition Funder	First Energy



BACKGROUND

The Lake Shore Power Plant, owned by FirstEnergy, became active in 1911 and closed in 2015. Located along Lake Erie, the plant served as the primary power source in Cleveland during the industrialization of the area and World War II. FirstEnergy closed this coal-fired plant instead of adhering to new standards required by federal regulation.^{1,2}

The City Planning Commission of Cleveland voted in January 2016 to let FirstEnergy demolish the site, despite local interest in preserving the structure.³ The final structure of the site was demolished in February 2017 at a total cost of \$15million to First Energy. ⁴ This sum funded the removal of asbestos and lead for the building and coal ash from the boilers.

STATUS

FirstEnergy and its planning consultant presented five potential reuse options for the site and is actively marketing the site. In the near term, the area will be re-sodded with grass and one substation will be left untouched.⁵ Cleveland Neighborhood Progress, the community development corporation in Cleveland, is working with Delta Institute to engage the City, the utility, and the local neighborhood in transition discussions.



¹ http://www.cleveland.com/business/index.ssf/2015/04/firstenergy_closes_104-year-ol.html

² http://www.cleveland.com/architecture/index.ssf/2016/01/lake_shore_plant_too_far_gone.html

³ http://www.cleveland.com/architecture/index.ssf/2016/04/city_planning_commission_votes.html

⁴ http://www.cleveland.com/architecture/index.ssf/2016/04/city_planning_commission_votes.html

⁵ http://www.cleveland.com/business/index.ssf/2017/02/lake_shore_plants_final_demoli.html

OHIO

TRANSITIONAL

TOLEDO GAS LIGHT & COKE COMPANY

Status	Planning
Closure Date:	1918
Current Owner:	River Road Redevelopment II, LLC
Employees at Time of Closure	Unknown
Proposed End Use	LEED certified building, river walkway
Projected Redevelopment Cost	\$5.5 million
Redevelopment Funder	Clean Ohio Revitalization Fund and Columbus Gas of Ohio



BACKGROUND

An example of a public-private partnership, Hull & Associates, Inc. consulting firm has been a major player in the redevelopment of the Erie Street coal gas manufacturing plant in Toledo, Ohio. This site was originally a coal gas manufacturing plant owned by Toledo Gas Light & Coke Company, operating until 1918. The coal gas manufacturing site was demolished and replaced with office and warehouse space in the 1940s, but contamination remained. In 1963, Columbia Gas of Ohio purchased the plant and used it for natural gas redistribution until 2010.¹

Hull & Associates purchased the site in 2011 and began remediationg with \$5.5 million in funding from the <u>Clean</u> <u>Ohio Revitalization Fund</u>² and Columbia Gas of Ohio. Funding was used for asbestos abatement, demolition of an old building on site, as well as remediation of contaminated soil and groundwater. The remediation process wrapped up in 2012.

- 1 http://www.hullinc.com/brownfields-portfolio-projects?portid=8
- 2 https://development.ohio.gov/cleanohio/
- 3 http://www.toledoblade.com/local/2013/09/19/Work-to-start-soon-on-office-downtown.html
- 4 http://mgpsymposium.com/sustainable-redevelopment-of-the-toledo-gas-light-coke-site-in-downtown-toledo-ohio/
- 5 http://www.hullinc.com/brownfields-portfolio-projects?portid=8



STATUS

In 2015, Hull started constructing their offices on the site. The 25,000 square fot two story office building will cost and estimated 2.8 million. Plans include a rooftop solar array and LEED certification. The remaineder of the site will be marketed to private developers and may be used by the nearbye Erie Street Market for a sustainable local foods business.^{3,4,5}

VERMONT

THE MORAN Burlington, VT

Status	Planning
Closure Date:	1986
Current Owner:	City of Burlington
Employees at Time of Closure	Unknown
Proposed End Use	local market and a community space for concerts and cultural festivals
Redevelopment Cost	\$15.4 million
Redevelopment Funder	Tax increment financing, private donations and historic tax credits



BACKGROUND

Located along the shores of Lake Champlain, the Moran Municipal Generating Station has been inactive since 1986. Now on the National Register of Historic Places, the Moran was constructed in 1954 for \$4 million and was named after a previous mayor of Burlington, J. Edward Moran.¹ The Moran sat vacant under the ownership of the Burligton Electric Department but in 1990, ownership was transferred to the City of Burlington where a series of mayors proposed and then failed to execute redevelopment plans.²

The plant had an original generating capacity of 30MW and was constructed to meet the electricity needs of Burlington. Later, the Moran Municipal Generating Station "became a source of angst for those who lived and worked downwind of it" due to soot and reported respiratory problems.³ By 1979, the majority of the plant was powered by

woodchips, due to a rise in cost for petroleum products. In 1986 Moran was decommissioned and has since remained vacant.

STATUS

The City of Burlington took ownership of the site in 1990 and started redevelopment plans in 2010. In March 2014, the City of Burlington signed a memorandum of understanding with New Moran Inc., a nonprofit which evolved from a Kickstarter campaign from University of Vermont students.⁴

New Moran, Inc. plans to redevelop the structure. According to VT Digger, a local news outlet, they have scaled back from an original plan costing over \$33 million to one with an estimated cost of \$15.4 million, which includes a local market and a community space for concerts and cultural festivals. This project would be funded through tax increment financing, private donations, and historic tax credits.^{5,6,7,8}

7 https://moranplant.org/get-informed/

deltainstitute

¹ https://www.burlingtonvt.gov/uploadedFiles/BurlingtonVTgov/Departments/CEDO/Waterfront/Moran/Site_Data/Nation al_Register_Nomination_MoranMunicipalGeneratingStation.pdf

² http://delta-institute.org/delta/wp-content/uploads/Coal-Plant-Overview-Report-10-21-14.pdf

³ https://www.burlingtonvt.gov/uploadedFiles/BurlingtonVTgov/Departments/CEDO/Waterfront/Moran/Site_Data/Nation al_Register_Nomination_MoranMunicipalGeneratingStation.pdf

⁴ https://www.kickstarter.com/projects/103052255/a-new-vision-for-burlingtons-abandoned-moran-plant

⁵ https://vtdigger.org/2017/01/24/developers-report-progress-scaled-back-moran-project/

⁶ https://vtdigger.org/2015/11/29/new-moran-has-ambitious-plans-for-burlingtons-waterfront/

⁸ https://vtdigger.org/2016/07/21/burlington-ends-pact-for-moran-plant-redevelopment/

VIRGINIA

POTOMAC RIVER

Status	Remediation/Planning
Closure Date:	2012
Current Owner:	NRG
Employees at Time of Closure	150
Proposed End Use	Open space amenities, energy center, and riverfront housing
Projected Redevelopment Cost	\$450 million
Redevelopment Funder	Unknown



BACKGROUND

The Potomac River Green Generating Station, formally owned by GenOn Energy, closed in 2012 after long-term pressure from residents and the city government. This plant had a generating capacity of 482 MW and, according the City of Alexandria's website, was the largest source of air pollution in Northern Virginia.¹

The American Clean Skies Foundation created a redevelopment plan for this site with a statement of support from the Sierra Club.² Their plan includes new housing along the riverfront and a new energy center and would create and estimated 2,200 new jobs.³

STATUS

As of today, the future of the Potomac River Generating Station is unresolved. After closure, NRG had issues with two underground storage tanks leaking, but have since developed and enacted a remediation plan. The site is still yet to be redeveloped.⁴



- 1 https://www.alexandriava.gov/GenOn
- 2 http://www.potomacrivergreen.org/wp-content/uploads/2016/01/Statement-from-Bruce-Nilles-ACSF-Report_SS_EDITS.pdf
- 3 http://www.potomacrivergreen.org/wp-content/uploads/2016/01/Pages-from-PRG_RedevBook_08.04.11_v2.pdf
- 4 http://www.prgsonline.org/pdf/prgs_presentation_04-23-14.pdf



WISCONSIN

TRANSITIONAL

BLACKHAWK GENERATING STATION

Status	Planning
Closure Date:	2017
Current Owner:	Alliance Energy
Employees at Time of Closure	Unknown
Proposed End Use	Student union and fitness center for Beloit College
Projected Redevelopment Cost	\$38 million
Redevelopment Funder	Private donations raised by Beloit Colleges



BACKGROUND

The Blackhawk Generation Station, located on Rock River, became operational in 1913. This once small station expanded twice, along with a rise in energy consumption. It was originally owned by Beloit Water, Gas & Electric Co., then Wisconsin Power & Light, and now Alliance Energy. The plant converted to natural gas in 1986, and in 2009, Wisconsin Power & Light announced closure, citing declining electricity sales.¹ It shut down in 2010 after almost 100 years of generation.

STATUS

Beloit College, a small liberal arts school nearby, took interest in redeveloping the site after closure and now has a formal agreement with Alliance Energy for redevelopment. Beloit College intends to convert the plant into a student union and fitness center. Chicagobased architecture firm Studio Gang designed the redevelopment plan, which includes sustainable elements, such as geothermal technology to maintain the building's temperature. Beloit College has raised over \$25 million so far for this donor-funded project.^{2,3,4,5}

- 2 https://www.beloit.edu/powerhouse/timeline/
- 3 http://magazine.beloit.edu/?story_id=245181&issue_id=245012
- 4 http://archive.jsonline.com/blogs/business/46127242.html
- 5 https://www.beloit.edu/campus/assets/Berkooz_Power_Plant_Reuse.pdf



¹ http://archive.jsonline.com/blogs/business/46127242.html

REDEVELOPED SITES

Coal plant sites have been repurposed for a variety of uses, often depending on the existing infrastructure and degree of environmental contamination as well as available financing. End uses can be public spaces, private uses, or both. Some sites capitalize on existing infrastructure and begin using alternate energy sources, and others are rebuilt from the ground up.

23. Homan Square Powerhouse, Chicago, IL
24. The Ottawa Street Power Station, Lansing, MI 32
25. Elk River Generating Station, Elk River, MN
26. Municipal Power House, St. Louis, MO34
27. Chester Power, Chester, PA
28. Seaholm, Austin, TX



ILLINOIS

REDEVELOPED

HOMAN SQUARE POWERHOUSE

Closure Date	2004
Current Owner	Foundation for Homan Square
End Use Type	Public and Private
Current Use	Mixed-Use Housing, Community Center, Henry Ford Academy
Redevelopment Cost	\$45 million
Redevelopment Funder	Shaw Company and City of Chicago



BACKGROUND

Built in 1905, the Homan Square Powerhouse provided power to the surrounding 55-acre Sears headquarters. The power plant provided power to the original Sears tower and a 3 million square foot printing plant, the largest business complex at the time.¹ The site was active until 1973 and then minimally active until 2004 when it was decommissioned.

The development of Homan Square began in 1989, when a new vision for the building that would support the surrounding community of North Lawndale was proposed by developer Charlie Shaw, Sears chairman Edward Brennan, and retired Sears Vice President Charley Moran. In 1995 the nonprofit Foundation for Homan Square was created to help move redevelopment forward.²³

OUTCOME

The new Homan Square Powerhouse earned LEED Platinum certification and is continually managed by the Foundation for Homan Square.⁴ This building combines past and present elements, retains original building features, and has a geothermal heating and cooling system. The final site includes mixed-use housing, a community center, and the Henry Ford Academy Charter School, known as "Powerhouse High." Powerhouse High closed in June 2015, and DRW College Prep is now located in the building and serves the former students of Powerhouse High.^{5,6}

- 2 http://delta-institute.org/delta/wp-content/uploads/Coal-Plant-Overview-Report-10-21-14.pdf
- 3 http://www.homansquare.org/
- 4 http://delta-institute.org/delta/wp-content/uploads/Coal-Plant-Overview-Report-10-21-14.pdf
- 5 http://phh.hfli.org/



¹ http://www.homansquare.org/history/sears-roebuck-and-co/

⁶ http://www.homansquare.org/services/henry-ford-academy-power-house-high/

REDEVELOPED

THE OTTAWA STREET POWER STATION

Closure Date	1992
Current Owner	AF Group
End Use Type	AF Group Headquarters
Current Use	Private
Redevelopment Cost	\$180 million
Redevelopment Funder	EPA Brownfields Revolving Loan Fund Grant and Private Investment



BACKGROUND

Located on the Grand River, the publically-owned Ottawa Street Power Station was constructed between 1937-1939 for \$4 million. Another historic landmark in the Lansing, Michigan area, the Ottawa Street Power Station is now a repurposed office complex. The Station was in service for 53 years, decommissioned in 1992, and sat vacant for 16 years.¹

AF Group purchased the site with the intention of redeveloping it for a new national headquarters. The site had a number of barriers to redevelopment, including: soil and groundwater contamination; urban fill consisting of bricks, concrete, and wood; as well as hazardous building materials, such as asbestos and lead paint. SME, an engineering and consulting firm, and the City of Lansing formed a public-private partnership to help make this possible.

SME received a loan from the city's EPA Brownfields Revolving Loan Fund Grant to help with remediation costs. AF Group also partnered with the Christman Company, a local developer, to bring overall investments in the site to \$180 million.^{2,3}

OUTCOME

This historic structure is now renovated with some additions: a 105,000 square foot addition and a 1,000-space parking deck. According to SME, who helped redevelop the site, this complex is "considered one of the largest power plant reclamations on record."⁴ The structure is used as the national headquarters of AF Group.^{5,6}

⁶ http://www.sme-usa.com/project/historic-undertaking-abandoned-1930s-power-plant-transform



¹ http://www.sme-usa.com/project/historic-undertaking-abandoned-1930s-power-plant-transform

² http://www.leelanau.cc/downloads/mike_gifford_presentation_on_rlf_grant.pdf

³ https://www.epa.gov/sites/production/files/2016-06/documents/4783_financial_incentives_508.pdf

⁴ http://www.sme-usa.com/project/historic-undertaking-abandoned-1930s-power-plant-transform

⁵ http://www.afgroupinsurance.com/about-afgroup/timeline/

MINNESOTA

REDEVELOPED

ELK RIVER GENERATING STATION

Closure Date	1989
Current Owner	Great River Energy
End Use Type	Private
Current Use	Refuse-derived fuel power plant
Redevelopment Cost	\$33 million
Redevelopment Funder	Great River Energy



BACKGROUND

Elk River Station was built in 1950 as a coal- and oil-fired facility by the Great River Energy Co-Op located 35 miles northwest of Minneapolis. After just nine years of operation, the plant was modified into a nuclear facility. In 1968 it was converted back to a coal- and oil-fired power plant. Finally, in 1989, it was once again converted, this time to a refuse-derived fuel power plant using municipal waste from approximately 25,000 homes in five counties. The 29 MW power plant has since been diverting approximately 300,000 tons of municipal solid waste from landfills each year.

OUTCOME

Comprised of 28 member cooperatives, Great River Energy is one of the largest customer-owned cooperative energy generators in the country. The refuse-derived fuel facility is considered a renewable source under Minnesota regulations, helping Great River Energy meet the aggressive State Renewable Portfolio Standard of 25% by 2025. Elk River is credited with avoiding emissions of 140,000 tons of CO_2 each year as compared to the original coal- and gas-powered facility.¹

1 http://www.greatriverenergy.com/makingelectricity/biomass/elkriverstation.html



MISSOURI

REDEVELOPED

MUNICIPAL POWER HOUSE

Closure Date	1980
Current Owner	Cannon Design
End Use Type	Private
Current Use	Office of Cannon Design
Redevelopment Cost	\$6 million
Redevelopment Funder	Cannon Design



BACKGROUND

Built in 1928, the Municipal Power House provided coalfired steam heat to a dozen buildings in St. Louis. This power house was part of a larger Municipal Service Building, which simultaneously housed a Fire Department Training school, a repair shop for city vehicles, and a parking garage.¹ According to the building's record for the National Register of Historic Places, the power house closed in 1968 "due to the prohibitive cost for conversion from high sulfur coal" as required by new clean air legislation.²

This space remained vacant until Cannon Design purchased the site in 2007. Cannon Design remodeled the interior of the site while keeping the exterior of this recognized historic landmark intact.

OUTCOME

The Municipal Power House is now the home of Cannon Design. The building still has its original steel frame and the plant's boilers are now used as exposed walls in conference rooms. The building is fitted with a number of sustainable features, a large urban garden and a rainwater collection system and has a LEED Gold Certification.^{3,4}

2 https://dnr.mo.gov/shpo/nps-nr/04001474.pdf



¹ https://dnr.mo.gov/shpo/nps-nr/04001474.pdf

³ http://www.hpbmagazine.org/attachments/article/12026/11Su-Cannon-Design-Regional-Offices-Power-House-St-Louis-MO. pdf

⁴ http://www.ecmag.com/section/miscellaneous/repurposing-power-house

PENNSYLVANIA

REDEVELOPED

CHESTER POWER

Closure Date	1970s
Current Owner	Preferred Real Estate Investments
End Use Type	Private
Current Use	Office Space
Redevelopment Cost	\$80 million
Redevelopment Funder	Preferred Real Estate Investments



BACKGROUND

Chester Power Station was built on the Delaware River in 1916 in Chester, Pennsylvania to accommodate power needs during World War I. 1

The site was decommissioned in the 1970, and remediated by Exelon Corportation. Exelon later sold the site to Preferred Real Estate Investments (PREI) for \$1, under an agreement that PREI would continue remediation efforts. Redevelopment involved removing boilers, turbines, and coal bunkers while keeping the historic structure sound.² The project cost \$80 million.

OUTCOME

The former coal plant became office space for Wells Fargo, Synergy, a tech consulting firm, among other companies. The site includes three buildings, including a turbine hall, which in addition to becoming the headquarters for Synergy, also includes concert and party space. "The Wharf at Rivertown" is an award-winning brownfield success that is a major part of a larger waterfront economic redevelopment strategy that included two marinas, a river walk, and restuartants.^{3,4} This project brought 1,500 jobs to Chester.^{5,6,7}

- 1 http://www.iedconline.org/clientuploads/Downloads/awards/2005_Winners.pdf
- 2 http://www.iedconline.org/clientuploads/Downloads/awards/2005_Winners.pdf



³ http://files.dep.state.pa.us/EnvironmentalCleanupBrownfields/BrownfieldRedevelopment/BrownfieldRedevelopmentPortalFiles/ success_stories/0100-fs-dep4149.pdf

⁴ http://www.westonsolutions.com/pdf_docs/Adaptive_Reuse_Redevelopment_Weston.pdf

⁵ http://www.iedconline.org/clientuploads/Downloads/awards/2005_Winners.pdf

⁶ http://www.delcotimes.com/article/DC/20110107/NEWS/301079934

⁷ http://www.ecmag.com/section/miscellaneous/repurposing-power-house

REDEVELOPED

TEXAS

SEAHOLM Austin, TX

Closure Date	1989
Current Owner	Seaholm Power LLC
End Use Type	Private
Current Use	Hotel, green space, public spaces
Redevelopment Cost	\$130 million
Redevelopment Funder	City of Austin



Image courtesy of: Kevin Dick

BACKGROUND

Austin Energy's Seaholm Power Plant was once the main power supplier for the City of Austin. The plant closed in 1989, in part due to pressure from a local citizen activist group due to environmental concerns. After sitting vacant and unused for many years, the plant received EPA's first "Ready for Reuse" designation in 2006.¹

The City of Austin created the Seaholm Reuse Planning Committee to hold public meetings and publish reports on community input to the City Council. After this public engagement process, the City moved forward with redevelopment plans that would preserve the architectural style of the building while providing a functional community space and mixed-use development.

The City collaborated with Seaholm Power LLC, a development partnership of five local companies, and

provided the developers with a \$27.5 million loan. The private developers are covering the remaining costs of redevelopment with the total price of the project estimated to be around \$130 million.²

The site plan included a 22-story residential and hotel structure, 60,000 square feet for retail and restaurants, over an acre of new green space, and two large public spaces for hosting community gatherings and activities. The development project was projected to create 200 new full-time jobs and bring in \$2 million in sales tax revenue.

OUTCOME

Development plans moved forward in 2015, as Athenahealth moved into the site in 2015, and residences at Seaholm power nearly sold out that same year. The structure is now a LEED Gold Facility and houses tech companies and a restaurant.^{3,4,5}



¹ http://delta-institute.org/delta/wp-content/uploads/Coal-Plant-Overview-Report-10-21-14.pdf

² http://www.seaholm.info/

³ https://americas.uli.org/awards/seaholm-power-plant-re-development-2017-global-awards-excellence-finalist/

⁴ http://kxan.com/2015/02/09/seaholm-tenant-moves-in-as-transformation-continues/

⁵ http://www.seaholm.info/

ACTIVE SITES

This section contains a selection of two active coal plants. One is partially closed and demonstrates the decisionmaking process of closure. The other highlights how certain challenges can keep communities from proactively addressing contamination.

29.5	Shawnee, Paduca	ah, KY			
30. E	Bruce Mansfield,	Greene	Township,	PA	



KENTUCKY

SHAWNEE Paducah, KY

Current Owner	Tennessee Valley Authority (TVA)
Generating Capacity	1206 MW
Employees	225
SO ₂ Emissions	29,834 tons in 2014
NO _x Emissions	12,331 tons in 2014



BACKGROUND

The Shawnee Fossil Plant, located on the Ohio River, has been in operation for 63 years. Unit 10 of this plant was retired in 2014, but Shawnee still has nine operating units.¹ Shawnee stores its coal ash on-site in ponds, generating about a half a million pounds of surface impoundment releases in 2006,² and is considering creating a dewatering facility. If pursued, the water may be repurposed by the plant or discharged into the river.³ Environmental and compliance organizations have brought up evidence of Shawnee contaminating groundwater in the past.^{4,5}

STATUS

TVA has closed some of their coal plants, but opted to keep Shawnee open. TVA decided to invest in this site by installing pollution abatement equipment, citing that abatement cost was lower and the plant is in better condition than other facilities.⁶ However, Shawnee installed the equipment after a settlement with the US EPA for allegedly violating the Clean Air Act.⁷



¹ https://www.tva.gov/Energy/Our-Power-System/Coal/Shawnee-Fossil-Plant

² https://www.facingsouth.org/2009/01/coals-ticking-timebomb-could-disaster-strike-a-coal-ash-dump-near-you.html

³ http://www.power-eng.com/articles/2016/09/tva-considers-dewatering-facility-at-coal-fired-power-plant.html

⁴ http://www.environmentalintegrity.org/news_reports/documents/20131107_TVAGroundwaterReport_FullDraft_000.pdf

⁵ http://www.kyenvironmentalfoundation.org/uploads/1/8/5/9/18595042/shawneehia_execsummary_10_13_lores.pdf

⁶ http://www.timesfreepress.com/news/business/aroundregion/story/2014/dec/30/powerful-choice-tva-expected-keep-ken tucky-coal-plant-after-shutting-down-32-other-coal-units/280241/

⁷ https://www.epa.gov/enforcement/tennessee-valley-authority-clean-air-act-settlement

PENNSYLVANIA

ACTIVE

BRUCE MANSFIELD Greene Township, PA

Current Owner:	FirstEnergy
Generating Capacity	350
Employees	2,490 MW
SO ₂ Emissions	19,784 tons in 2014
NO _x Emissions	18,563 tons in 2014



BACKGROUND

One of the largest unlined coal ash impoundments in the nation is Little Blue Run, located in Greene Township in Beaver County, Pennsylvania. Famous for it's bright blue color, potentially due to calcium sulfite, this sites trademark color has paled in recent years.¹

The Bruce Mansfield Plant and the associated Little Blue Run coal ash impoundment are owned by FirstEnergy. Bruce Mansfield is FirstEnergy's largest coal-fired plant, able to produce 2,490 MW of electricity and paying \$1.5 million in property taxes.² Coal ash is a byproduct of coal combustion and can contain harmful contaminants, such as arsenic, lead, and cadmium.

Nonprofit organizations, Little Blue Run Action group and Environmental Integrity (EI), sought to address the documented local groundwater contamination caused by the coal ash impoundment. Through a consent decree, First Energy was ordered to provide potable water to all residents with contaminated drinking water wells. To comply with this order, FirstEnergy had been supplying water to some and buying out residents' land in other cases. The result was a community that was emptying out and structures demolished in roughly concentric circles around the contamination sites.

A working group was formed to make decisions about how and if Greene Township could apply for federal funding to conduct an engineering study to obtain potable water on a permanent basis. Both a feasibility study for finding other sources of clean drinking water and a new master plan that expands to the four-township region were discussed as possible uses for grant funds.

STATUS

After a slow response from FirstEnergy, difficulty finding matching money for grants, and internal disagreement at the township level, the effort was ended. Greene Township elected to continue to accept buyouts and potable water from FirstEnergy in lieu of identifying an alternative source of drinking water for the future.

While the future of this site has not been determined, its current situation highlights some of the challenges that can keep communities from proactively addressing remediation and redevelopment.

1 http://news.nationalgeographic.com/news/energy/2012/08/120809-little-blue-run-coal-ash-pond-to-close/

2 https://www.firstenergycorp.com/content/dam/corporate/generationmap/files/Bruce%20Mansfield%20Plant%20Facts.pdf



ANNOUNCED COAL PLANT CLOSURES (EIA MAY 2017 DATA)

List of coal plants where all units have a closure date.

O rearstan	Direct Name	Year	Country	
Operator	Plant Name	Retiring	County	Plant State
	St Johns River	2018		-
JEA	Power Park		Duval	FL
Midwest Generations EME LLC	Will County	2018	Will	IL
GenOn Mid-Atlantic LLC	Dickerson	2021	Montgomery	MD
Brayton Point Energy LLC	Brayton Point	2017	Bristol	MA
Wisconsin Electric Power Co	Presque Isle	2019	Marquette	MI
Kansas City Power & Light Co	Montrose	2018	Henry	МО
KCP&L Greater Missouri		2019		
Operations Co	Sibley	2010	Jackson	МО
	PSEG Mercer			
	Generating	2017		
PSEG Fossil LLC	Station		Mercer	NJ
Dayton Power & Light Co	J M Stuart	2018	Adams	он
South Carolina Electric&Gas		2020		
Company	McMeekin	2020	Lexington	SC
	Transalta			
	Centralia	2025		
TransAlta Centralia Gen LLC	Generation		Lewis	WA
Appalachian Power Co	Kanawha River	2017	Kanawha	WV
Dayton Power & Light Co	Killen Station	2018	Adams	ОН
Portland General Electric Co	Boardman	2021	Morrow	OR
City of San Antonio - (TX)	J T Deely	2018	Bexar	ТХ
AES Hawaii Inc	AES Hawaii	2022	Honolulu	н



ANNOUNCED PARTIAL CLOSURES (EIA MAY 2017 DATA)

List of plants that are only partially run on coal currently and all coal fired units have a closure date.

Operator	Plant Name	County	State
Public Service Co of			
Colorado	Valmont	Boulder	СО
Otter Tail Power Co	Hoot Lake	Otter Tail	MN
KCP&L Greater			
Missouri Operations			
Со	Lake Road (MO)	Buchanan	МО
City Utilities of	James River Power		
Springfield - (MO)	Station	Greene	МО
Duke Energy			
Progress - (NC)	Asheville	Buncombe	NC
Tennessee Valley			
Authority	Johnsonville	Humphreys	TN
Virginia Electric &			
Power Co	Yorktown	York	VA
Southern Indiana Gas & Elec Co	A B Brown	Posey	IN

Contact Us

Caitlin Dillon Delta Institute cdillon@delta-institute.org 35 E. Wacker, Ste. 1200 Chicago, IL 60601

