
Air Emission and Economic Impacts of Retiring the Shawnee Fossil Plant

Prepared for the Kentucky Environmental Foundation

February 27, 2014

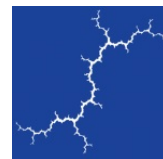
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1. INTRODUCTION

Synapse Energy Economics, Inc. (Synapse), an independent energy and economic consulting firm in Cambridge, MA, analyzed the economic and emissions impacts of retiring the Shawnee Fossil Plant. These impacts were based on the difference between two scenarios for the future of Shawnee:

1. **Retirement.** This scenario assumes that all ten units of Shawnee are retired by January of 2017 and decommissioned thereafter.
2. **Retrofit.** This scenario assumes that TVA will retire Shawnee unit 10 and retrofit units 1 through 9 to comply with the U.S. EPA consent decree and future EPA regulations for cooling, effluent, and coal ash residuals.

The difference in emission and economic impacts resulting from each scenario represents the net changes in activity from ceasing plant operations relative to continuing to operate in the future. Therefore, the economic impacts from retirement include a net loss of employment from avoiding future plant operations (including foregone installation and operation of new retrofits) and a net gain of employment from decommissioning the plant after its retirement. The emission impacts are based on the net loss in emissions from operating the plant with new environmental controls; thus, the reduction in emissions is less than if compared to current plant emission levels.

These two scenarios represent two extreme possibilities for the plant's future: all remaining units (i.e. 1 through 9) are completely retired or retrofit. It is likely that the future for the plant will lie somewhere in between these two extremes. For instance, as part of the Consent Decree, TVA has stated that it is possible it will retire units 1 and 4 but has not expressed the possibility of retiring other units. This analysis does not look at all possible combinations of unit retirement or retrofit; the resulting impacts should be viewed as a "bookend."

2. AIR EMISSION IMPACTS

The retirement or retrofit of the Shawnee plant will result in a reduction of air pollutant emissions and associated health risks compared to current emission levels. Retirement of the plant would result in the cessation of all emissions at the plant (assuming that no replacement generation is built at or near the site). Future operation of the plant will require mitigation of air pollutant levels to comply with the U.S. EPA Consent Decree and other future environmental regulations.

Table 1 shows the historical and projected emissions levels of sulfur dioxide (SO₂), nitrous oxide (NO_x), and carbon dioxide (CO₂) at the Shawnee plant. The average annual emission levels in recent years (an



average of 2010 through 2013¹) were approximately 27,000 tons of SO₂, 14,000 tons of NO_x, and 8.2 million tons of CO₂. The SO₂ and NO_x levels will decrease with the installation of emission controls. Synapse estimates that by 2020, annual emission levels could reach 8,000 tons of SO₂ (a 70% reduction from current levels) and 6,000 tons of NO_x (a 57% reduction from current levels). However, in the absence of carbon capture technology adoption or compliance with future carbon regulation, we assume that carbon dioxide emissions would persist at levels similar to that of recent history.²

Table 1: Air Emission Impacts for Select Years (tons)

Air Pollutant	2010-2013 (annual average)	2017 (post consent decree)	2020 (post additional retrofits)
Sulfur Dioxide (SO ₂)	27,000	8,000	8,000
Nitrous Oxide (NO _x)	14,000	11,000	6,000
Carbon Dioxide (CO ₂)	8,200,000	8,200,000	8,200,000

Source: EPA AMPD database. Synapse SO₂ and NO_x rate assumptions. SO₂ and NO_x rounded to nearest thousand, CO₂ rounded to nearest hundred thousand.

According to conversations between KEF and TVA, TVA plans to install Dry Sorbent Injection (DSI) on units 1 through 9 for removal acid gases (e.g. sulfur dioxide) to comply with the U.S. EPA Mercury Air Toxics Standard (MATS). MATS compliance also requires mercury removal which will likely involve installation of Activated Carbon Injection (ACI) at units 1 through 9. TVA must also install Selective Catalytic Reduction (SCR) on units 1 and 4 by 2017 for removal of NO_x.³ In addition, we assume that TVA will need to install Selective Non-Catalytic Reduction (SNCR) for NO_x removal on remaining units (i.e. 2, 3, 5, 6, 7, and 8) to comply with future, more stringent National Ambient Air Quality Standards (NAAQS). (Further detail on the assumptions underlying regulatory compliance and related emissions is provided in the Methodology section.)

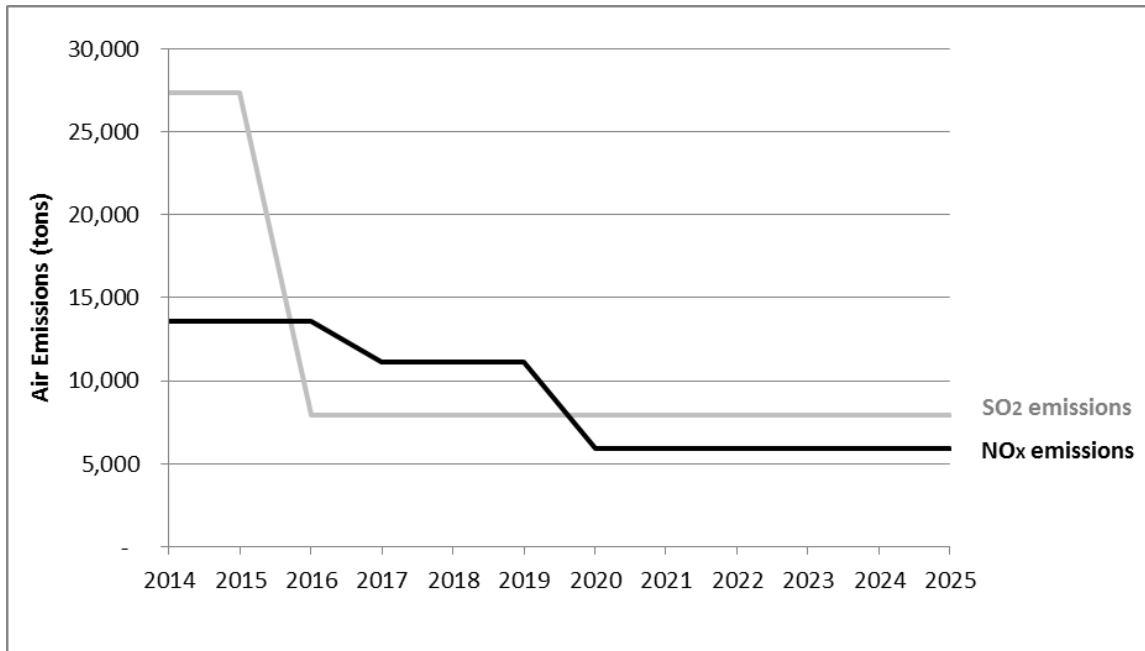
Figure 1 shows the projected emissions of SO₂ and NO_x by year, assuming that emissions controls are installed. The sharp decrease in SO₂ emissions in 2016 results from the installation of DSI on units 1 through 9. The decreases in NO_x result from the installation of SCR on units 1 and 4 by 2017 and the installation of SNCR on remaining units by 2020.

¹ EPA emissions data for 2013 were only available through September; this year's emissions were extrapolated to the annual level.

² It is likely that carbon regulation will be enacted in the U.S. in the near future. For instance, possible compliance options with Clean Air Act Section 111(d) could include an emissions standard or increased energy efficiency and renewable energy generation which would result in reduced operations at Shawnee. However, Synapse has not accounted for the change in plant operations that would result from such a regulation.

³ The Consent Decree specifies that Shawnee units 1 and 4 have the option to be retired, converted to biomass, or retrofitted with Flue Gas Desulfurization (FGD) and Selective Catalytic Reduction (SCR). In the retrofit scenario, Synapse assumes that the units will be retrofitted with SCR and that TVA will claim that DSI is sufficient to satisfy SO₂ removal.

Figure 1: Annual SO₂ and NO_x Emissions with Installed Controls



Source: U.S. EPA AMPD and Synapse

The installation and operation of emission controls would drastically reduce air emissions of SO₂ and NO_x at Shawnee from current levels. The retirement of the plant would result in the removal of these emissions altogether. In either case, the effect would be felt in the local area and locations downwind from the plant. Sulfur dioxide is a known contributor to acid rain. Nitrous oxide acidifies soil, harms aquatic life, and contributes to ozone. Both types of emissions are also precursors to particulate matter (PM) which has been linked to serious respiratory disease, among other harmful health impacts.⁴

3. ECONOMIC AND FISCAL IMPACTS

Investments and operations at the Shawnee plant affect the level of economic activity in McCracken County and surrounding areas. Retirement of the plant would result in lost jobs from plant operations and avoided jobs associated with building and operating environmental controls; however, it would also generate jobs associated with the decommissioning of the plant for several years after its retirement (assuming this activity occurs after retirement). The retrofit of the plant would keep jobs that are currently at the plant and generate jobs associated with building and operating environmental controls in the future.

⁴ Keith, G., S. Jackson, A. Napoleon, T. Comings and J. Ramey. *The Hidden Costs of Electricity: Comparing the Hidden Cost of Power Generation Fuels*. Prepared for Civil Society Institute, September 19, 2012.

Figure 2 shows the assumed timeline of economic activity for each scenario. The economic impacts of retirement result from the difference in economic activity between these two scenarios: a net loss of employment from avoiding future plant operations (including foregone installation and operation of new retrofits) and a net gain of employment from decommissioning the plant after its retirement. (Further detail on economic impact modeling is provided in the Methodology section.)

Figure 2: Timeline of Economic Activity for Retire and Retrofit Scenarios

Scenario	2014	2015	2016	2017	2018	2019	2020
Retrofit	Normal Plant Operations						
	DSI, ACI Installation		DSI, ACI Operations				
		SCR Installation		SCR Operations			
					SNCR, ELG, CCR, Cooling Installation		SNCR, ELG, CCR, Cooling Operations
Retire	Normal Plant Operations						
	DSI, ACI Installation						
				Decommissioning			

Source: TVA and Synapse

Total economic impacts are comprised of *direct job or income impacts* at the plant (currently there are about 300 full-time workers) and spin-off effects referred to as *indirect* and *induced impacts*. Indirect impacts occur in industries that supply operations and construction activity. Induced impacts result from economy-wide spending of wages of workers in the direct and indirect industries. The total economic impacts of retiring Shawnee for three counties in the region (McCracken, Marshall, and Ballard) are shown in terms of jobs in Table 2 and in terms of income in Table 3. Since there are no differences in economic activity between the retire and retrofit scenarios in 2014, the net economic impacts are zero for that year. However, there is a discrepancy in economic activity between retiring and operating the plant in later years. The maximum job loss from retiring the plant is approximately 750 jobs in 2018 and 2019 (\$37.5 million in income) with a minimum job loss of 440 jobs in 2017 (\$24.1 million in income).

Table 2: Net Direct, Indirect and Induced Employment Impacts of Retiring Shawnee by County

County	2014	2015	2016	2017	2018	2019	2020
McCracken	0	-410	-480	-410	-690	-690	-430
Marshall	0	-30	-30	-20	-40	-40	-20
Ballard	0	-20	-20	-10	-20	-20	-10
Total	0	-460	-530	-440	-750	-750	-460

Source: Synapse and IMPLAN



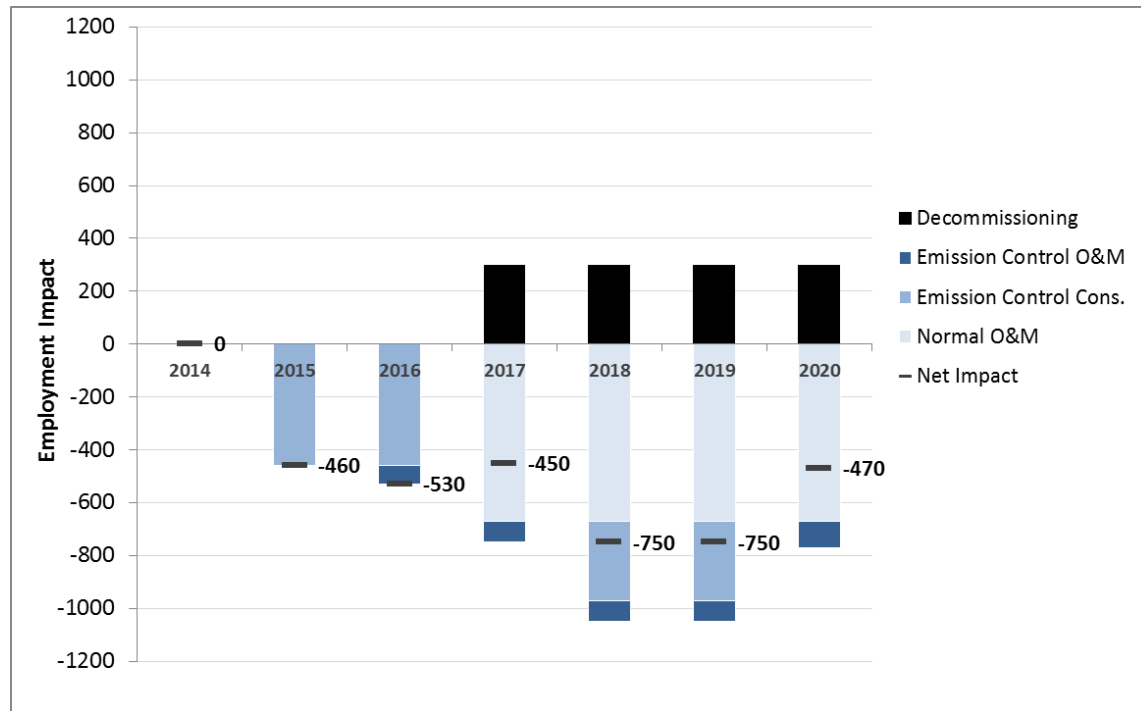
Table 3: Net Direct, Indirect and Induced Income Impacts of Retiring Shawnee by County (\$2013 millions)

County	2014	2015	2016	2017	2018	2019	2020
McCracken	\$0	-\$19.0	-\$22.3	-\$45.6	-\$58.1	-\$58.1	-\$47.1
Marshall	\$0	-\$0.9	-\$1.1	-\$2.6	-\$3.2	-\$3.2	-\$2.7
Ballard	\$0	-\$0.6	-\$0.7	-\$1.6	-\$2.0	-\$2.0	-\$1.6
Total	\$0	-\$20.4	-\$24.2	-\$49.8	-\$63.3	-\$63.3	-\$51.4

Source: Synapse and IMPLAN

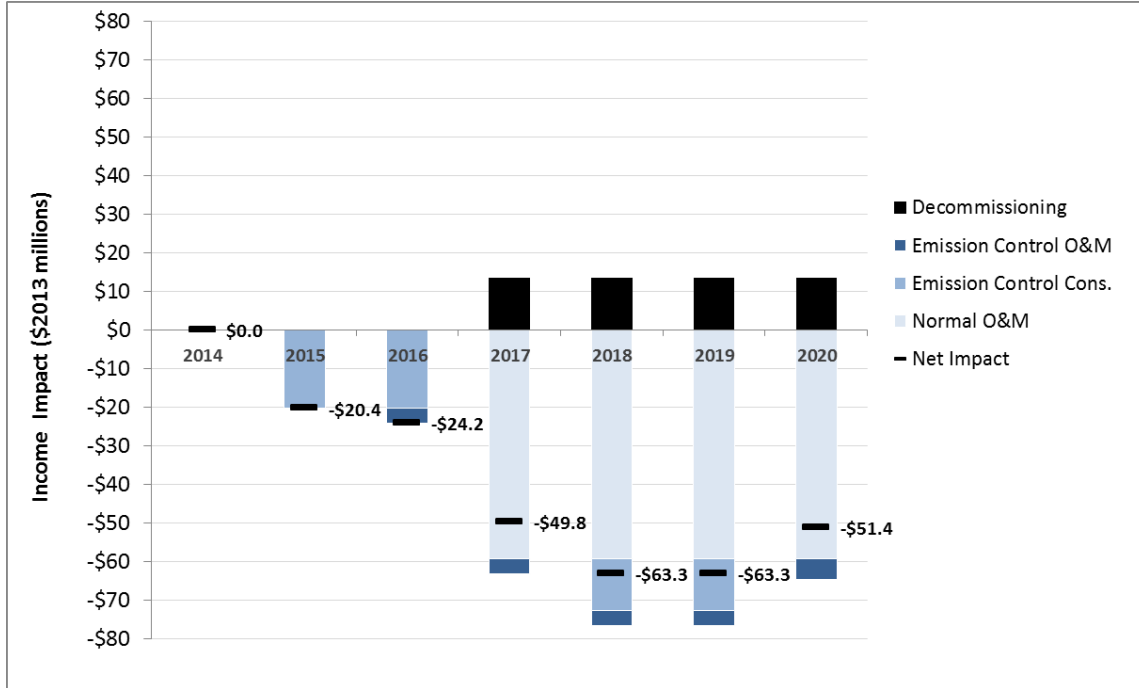
The discrepancy in economic activity levels between scenarios accounts for the net job and income loss with retiring Shawnee in each year. Figures 3 and 4 show the total (direct, indirect and induced) employment and income impacts, respectively, broken down by type of activity. With retirement, decommissioning activity accounts for a gain of 300 jobs per year (\$13.5 million in income), which partially offsets the job losses from operating the plant and installing new environmental controls (over 1000 jobs in 2018 and 2019 or \$77 million in income). Jobs associated with decommissioning and installing emission controls are short-term, while operations of the plant and controls are long-term. Therefore, after 2020, the job losses would be nearly 800 in each subsequent year—assuming the plant operates as it has in recent history.

Figure 3: Net Direct, Indirect and Induced Employment Impacts of Retiring Shawnee by Type of Activity



Source: Synapse and IMPLAN

Figure 4: Net Direct, Indirect and Induced Income Impacts of Retiring Shawnee by Type of Activity (\$2013 millions)



Source: Synapse and IMPLAN

TVA and workers at Shawnee also contribute to McCracken County tax revenue through PILOT (Payments in Lieu of Taxes) and payroll tax payments. Based on historical data on tax collection and discussions with the County Treasurer, we estimate an annual tax reduction of \$1.1 million in PILOT payments from TVA to the state that is allocated to McCracken County. Shawnee’s workers are also responsible for \$300,000 in payroll taxes paid to the county.⁵ Table 4 shows the estimated net payroll tax impacts to McCracken County broken down by each activity type--assuming other activities’ income would be taxed at a 1% rate.⁶ This result shows a maximum net impact of \$330,000 in 2018 and 2019 and a minimum net impact of \$140,000 in 2015.

⁵ PILOT payments from TVA are based on all of its assets in McCracken County, which includes the Shawnee plant, transmission wires, and other infrastructure. We cannot disentangle how much of these payments are due to Shawnee alone. Therefore, in the absence of the plant, PILOT payments to the county would still exist but would be significantly smaller.

⁶ According to Kentucky Society of Certified Public Accountants, as cited here: <http://www.thinkkentucky.com/cmnty/taxincent.aspx?cw=096>

Table 4: Direct McCracken County Payroll Tax Impacts by Activity Type (\$2013 millions)

Activity	2014	2015	2016	2017	2018	2019	2020
Normal O&M	\$0	\$0	\$0	-\$0.30	-\$0.30	-\$0.30	-\$0.30
Emission Control Construction	\$0	-\$0.14	-\$0.14	\$0	-\$0.09	-\$0.09	\$0
Emission Control O&M	\$0	\$0	-\$0.02	-\$0.03	-\$0.03	-\$0.03	-\$0.04
Decommissioning	\$0	\$0	\$0	\$0.09	\$0.09	\$0.09	\$0.09
Total	\$0.00	-\$0.14	-\$0.16	-\$0.23	-\$0.33	-\$0.33	-\$0.25

Source: Synapse, IMPLAN, McCracken County Treasurer, and Kentucky Society of Certified Public Accountants

4. CONCLUSION

The closure of the Shawnee plant would reduce harmful air emissions as well as economic activity in the region. However, as previously noted, the comparison of retire and retrofit scenarios in this analysis represent a “bookend” of impacts. Each scenario is an extreme case—all units cease operation or are controlled and operated—whereas the outcome is likely to lie somewhere in between the two cases. For example, TVA could choose to retire units 1 and 4 per one of their options in the Consent Decree. The results of this analysis apply to Shawnee units 1 through 9 as a whole; a subset of unit retirements would generate lower emission and economic impacts.

5. METHODOLOGY

5.1. Air Emission Assumptions

Synapse derived air emissions impacts based on sulfur dioxide (SO₂) and nitrous oxide (NO_x) emissions reported in U.S. EPA’s Air Markets Program Data (AMPD) for the Shawnee plant. Synapse assumed that Shawnee units 1 through 9 would have to reduce SO₂ emissions from current levels of approximately 0.7 lbs per MMBtu of fuel burned to a much lower rate of 0.2 lbs per MMBtu by 2016. Synapse also assumed that NO_x emissions would be decreased from approximately 0.34 lbs per MMBtu to 0.17 lbs per MMBtu in 2020.

5.2. Emission Control Costs

Synapse developed capital and operating costs for emission controls at Shawnee using its custom-made Coal Asset Valuation Tool (CAVT), which relies on Sargent and Lundy cost estimates (among other sources).⁷

Sulfur Dioxide

TVA informed KEF that it is installing DSI systems on units 1 through 9. Synapse assumed that these would all be in place before the plant could retire in 2016. Therefore, the impacts of installing these controls were not accounted for in Synapse's analysis, since they occur in both scenarios. However, Synapse did include the operating costs of this technology, since this activity could be avoided in future years, if the plant were retired. Synapse estimated the annual operating costs would be \$36 million for DSI at units 1 through 9 based on Sargent and Lundy's "Dry Sorbent Injection Cost Development Methodology."⁸

Nitrous Oxide

Synapse assumed that Selective Catalytic Reduction (SCR) would be installed on units 1 and 4 to comply with the Consent Decree and Selective Non-Catalytic Reduction (SNCR) would be installed on the rest of the units. Synapse estimated that SCR would cost \$82 million in upfront capital and \$2 million annually to operate for units 1 and 4; SNCR would cost \$22 million in capital and \$10 million annually for units 2, 3, 5, 6, 7, and 8. SNCR costs are based on Sargent and Lundy's "IPM Model – Revisions to Cost and Performance for APC Technologies, SNCR Cost Development Methodology."⁹ SCR costs are based on their "IPM Model – Revisions to Cost and Performance for APC Technologies, SCR Cost Development Methodology."¹⁰

Mercury

As with DSI, the capital investment was not modeled since it would occur in both retire and retrofit scenarios. However, the continued operation of ACI would be avoided with retirement. Synapse estimated that ACI would cost \$3.5 million annually for units 1 through 9. The costs of installing, operating, and maintaining an activated carbon injection (ACI) system for mercury control modeled in

⁷ Knight, P., E. A. Stanton, J. Fisher and B. Biewald. Forecasting Coal Unit Competitiveness: Coal Retirement Assessment Using Synapse's Coal Asset Valuation Tool (CAVT). October 11, 2013. Available here:

<http://www.synapse-energy.com/Downloads/SynapseReport.2013-10.EF.CAVT-Report.13-020A.pdf>.

⁸ Available here: http://www.epa.gov/airmarkets/progsregs/epa-ipm/docs/append5_4.pdf

⁹ Available here: <http://www.epa.gov/airmarkets/progsregs/epa-ipm/docs/v410/Appendix52B.pdf>

¹⁰ <http://www.epa.gov/airmarket/progsregs/epa-ipm/docs/v410/Appendix52A.pdf>



this analysis are based on Sargent and Lundy’s 2011 document, “IPM Model- Revisions to Cost and performance for APC Technologies: Mercury Control Cost Development Methodology.”¹¹

Cooling

For Shawnee units 1 through 9, where daily water intake flows are less than 125 million gallons per day, the only cooling controls modeled are for impingement. We estimate that these controls would cost \$6 million in capital and have low operating costs of \$400,000 per year. The economic impacts would be greater if TVA decided to install more costly cooling towers at Shawnee. The capital and operating costs of controls on cooling systems modeled in this analysis are based on EPA’s 2011 document, “Technical Development Document for the Proposed Section 316(b) Phase II Existing Facilities Rule.”¹²

Coal Ash

We assume that the capital investments would be the same if the plant retired or continued to operate; however, this would require further input from TVA. The variable costs of coal ash removal would certainly be avoided if the plant were to retire. Synapse estimated these costs to be approximately \$9 million per year for units 1 through 9. The costs modeled for coal combustion residuals are based on Edison Electric Institute’s 2011 document, “Potential Impacts of Environmental Regulation on the U.S. Generation Fleet”.¹³ The CCR costs modeled assume the closure of ash ponds and conversion of wet to dry ash handling under Subtitle D (i.e., non-hazardous treatment) of the Resource Conservation and Recovery Act (RCRA).

Effluent

The control costs modeled assume Regulatory Option 3 of the proposed effluent limitations guidelines and standards for steam electric power plants. This means that existing effluent controls are converted to handle dry ash, and any FGD wastewater undergoes chemical precipitation and biological treatment. Synapse estimated upfront capital costs of \$26 million and annual operating costs of \$4.5 million for this technology. The costs of controls modeled in this analysis are based on EPA’s 2013 document, “Technical Development Document for the Proposed Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category.”¹⁴

¹¹ Available here: http://www.epa.gov/airmarkets/progsregs/epa-ipm/docs/append5_3.pdf.

¹² Available here: <http://water.epa.gov/lawsregs/lawsguidance/cwa/316b/upload/technicaldevelopment.pdf>.

¹³ Available here:
http://www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Integrated_Resource_Plan/2011IRP/EEIModeling_ReportFinal-28January2011.pdf.

¹⁴ Available here:
http://water.epa.gov/scitech/wastetech/guide/steam-electric/upload/Steam-Electric_EA_Proposed-rule_2013.pdf.

5.3. Decommissioning Costs

The costs of decommissioning the plant are based on case studies in EPRI’s “Decommissioning Handbook for Coal-Fired Power Plants.”¹⁵ In general, there is a lack of data on decommissioning costs available. Therefore, Synapse calculated the average cost per unit of capacity for plants in that study (\$132 per kilowatt). This average was then applied to the size of Shawnee units 1 through 9 to arrive at a cost of \$208 million and decommissioning was assumed to last five years (i.e. \$41.6 million of spending per year).

5.4. Economic Impact Modeling

The costs discussed in this section provide the inputs for the employment and income impact factor analysis. In general, economic impacts are a measure of an investment or policy’s stimulus (or footprint) on a local economy. They are composed of direct, indirect, and induced impacts, described below:

- Direct impacts include workers on-site during the installation of controls or that operate and maintain the generating facilities while they are up and running. Synapse first estimated the materials-versus-labor spending for each resource. The amount of labor spending for each resource divided by the associated industry wages in the region (from the IMPLAN industry data for McCracken County) results in the number of direct jobs and income.
- Indirect impacts include jobs and income associated with materials to support construction, operations, and maintenance (e.g. coal from mines). The extent to which these materials are produced in-state (e.g., the portion of coal that is produced in the three-county region) is an important determinant of indirect impacts. Synapse relied on the IMPLAN model’s estimates for the portion of each industry’s demand that is met by suppliers in the region.
- Induced impacts include jobs and income for goods and services that serve households. These occur when workers from both the direct and indirect activities re-spend their wages, further stimulating the three-county economy.

Direct job and income impacts by type of activity are shown in Tables 5 and 6, respectively, for the three-county region. The direct impacts are based on reported jobs at the plant and the share of spending on labor for installation and operation of emission controls. In this case, the IMPLAN sector for “federal electric utilities” was used to model impacts of workers at Shawnee and “construction of other new nonresidential structures” was used for decommissioning and emission control activities. The average wage for Shawnee workers was estimated to be \$73,000 per year (based on data from TVA). We assumed an average wage of \$56,000 for construction workers based on the IMPLAN data for the

¹⁵ Available here: <http://www.epri.com/search/Pages/results.aspx?k=Decommissioning%20Handbook%20for%20Coal-Fired%20Power%20Plants>



region. The share of spending on these activities dedicated to labor is then divided by the average wage for the corresponding sector to estimate the direct jobs.

Table 5: Direct Employment Impacts of Retiring Shawnee for Three-County Region

Activity	2014	2015	2016	2017	2018	2019	2020
Normal O&M	0	0	0	-290	-290	-290	-290
Emission Control Construction	0	-250	-250	0	-160	-160	0
Emission Control O&M	0	0	-30	-40	-40	-40	-60
Decommissioning	0	0	0	180	180	180	180
Total	0	-250	-280	-150	-310	-310	-170

Source: Synapse and IMPLAN

Table 6: Direct Income Impacts of Retiring Shawnee for Three-County Region (\$2013 millions)

Activity	2014	2015	2016	2017	2018	2019	2020
Normal O&M	\$0	\$0	\$0	-\$21.4	-\$21.4	-\$21.4	-\$21.4
Emission Control Construction	\$0	-\$13.9	-\$13.9	\$0	-\$9.1	-\$9.1	\$0
Emission Control O&M	\$0	\$0	-\$2.5	-\$2.6	-\$2.6	-\$2.6	-\$4.1
Decommissioning	\$0	\$0	\$0	\$9.2	\$9.2	\$9.2	\$9.2
Total	\$0	-\$13.9	-\$16.3	-\$14.8	-\$24.0	-\$24.0	-\$16.3

Source: Synapse and IMPLAN

Indirect impacts generated by type of activity are shown in Tables 7 and 8 for the 3-county region. These impacts are generated by the spending on materials for construction and O&M that are produced in the region. This spending is allocated based on the composition of supplies needed by each resource type as developed by Synapse and IMPLAN. The vector of materials spending is run through the IMPLAN model for each activity, generating impacts for suppliers of the materials and their suppliers, etc.

Table 7: Indirect Employment Impacts of Retiring Shawnee for Three-County Region

Activity	2014	2015	2016	2017	2018	2019	2020
Normal O&M	0	0	0	-240	-240	-240	-240
Emission Control Construction	0	-80	-80	0	-50	-50	0
Emission Control O&M	0	0	-30	-30	-30	-30	-30
Decommissioning	0	0	0	30	30	30	30
Total	0	-80	-110	-240	-290	-290	-240

Source: Synapse and IMPLAN



Table 8: Indirect Income Impacts of Retiring Shawnee for Three-County Region (\$2013 millions)

Activity	2014	2015	2016	2017	2018	2019	2020
Normal O&M	\$0	\$0	\$0	-\$24.9	-\$24.9	-\$24.9	-\$24.9
Emission Control Construction	\$0	-\$2.5	-\$2.5	\$0	-\$1.7	-\$1.7	\$0
Emission Control O&M	\$0	\$0	-\$0.4	-\$0.4	-\$0.4	-\$0.4	-\$0.5
Decommissioning	\$0	\$0	\$0	\$1.3	\$1.3	\$1.3	\$1.3
Total	\$0.0	-\$2.5	-\$3.0	-\$24.1	-\$25.7	-\$25.7	-\$24.1

Source: Synapse and IMPLAN

Induced impacts generated by type of activity are shown in Tables 9 and 10 for the three-county region. These impacts are generated by re-spending on goods and services using direct and indirect wages. For Shawnee workers (including current operations and decommissioning), Synapse assumed that wages were re-spent in their county of residence: 47% of workers live in McCracken County, 15% live in Marshall County and 11% live in Ballard County.

Table 9: Induced Employment Impacts of Retiring Shawnee for Three-County Region

Activity	2014	2015	2016	2017	2018	2019	2020
Normal O&M	0	0	0	-140	-140	-140	-140
Emission Control Construction	0	-130	-130	0	-90	-90	0
Emission Control O&M	0	0	-10	-10	-10	-10	-10
Decommissioning	0	0	0	90	90	90	90
Total	0	-130	-140	-60	-150	-150	-60

Source: Synapse and IMPLAN

Table 10: Induced Income Impacts of Retiring Shawnee for Three-County Region (\$2013 millions)

Activity	2014	2015	2016	2017	2018	2019	2020
Normal O&M	\$0	\$0	\$0	-\$13.1	-\$13.1	-\$13.1	-\$13.1
Emission Control Construction	\$0	-\$4.0	-\$4.0	\$0	-\$2.6	-\$2.6	\$0
Emission Control O&M	\$0	\$0	-\$0.8	-\$0.8	-\$0.8	-\$0.8	-\$0.8
Decommissioning	\$0	\$0	\$0	\$3.0	\$3.0	\$3.0	\$3.0
Total	\$0.0	-\$4.0	-\$4.8	-\$10.9	-\$13.6	-\$13.6	-\$10.9

Source: Synapse and IMPLAN