

THE ECONOMIC, FISCAL, AND SOCIAL IMPACTS OF UTILITY-OWNED COAL-FIRED POWER PLANTS IN IOWA

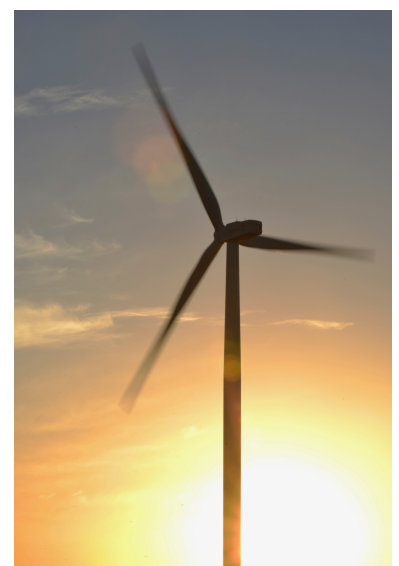
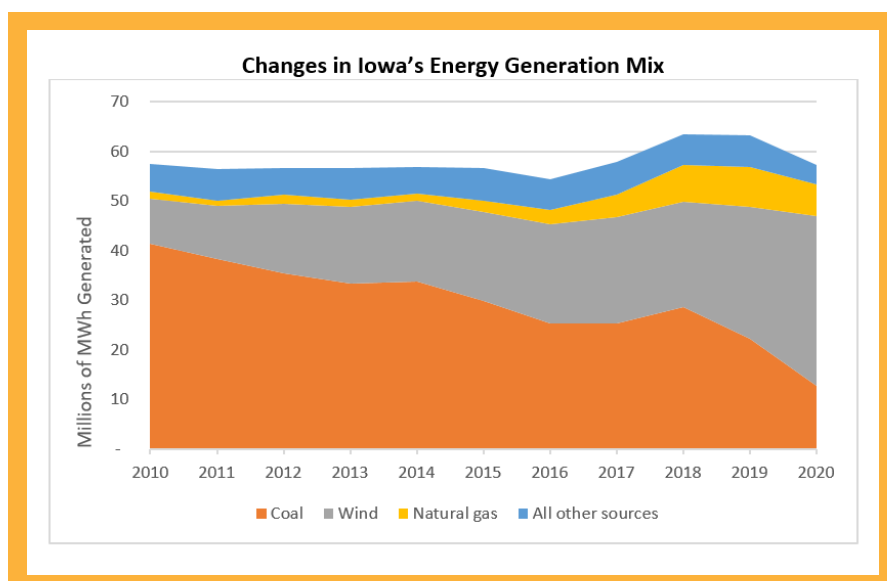
EXECUTIVE SUMMARY

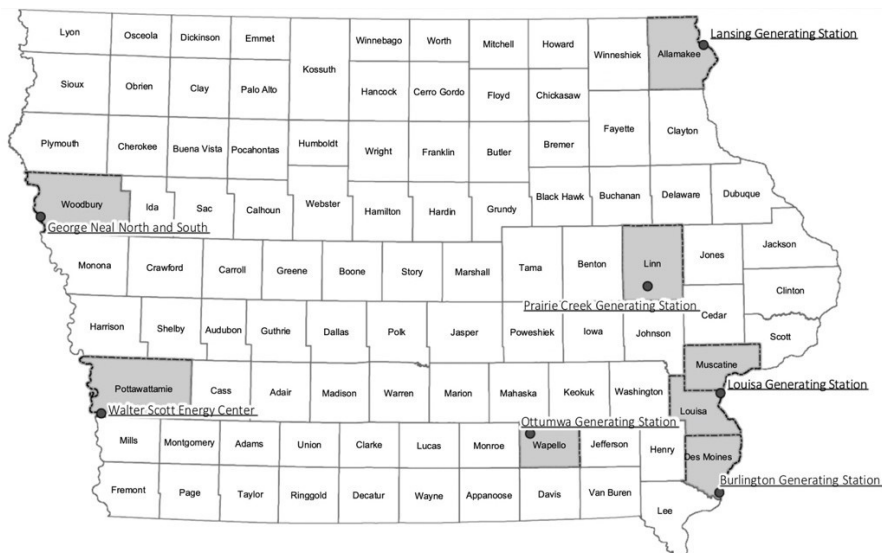


Iowa's energy generation system is changing and will continue to impact the economies of communities where coal-fueled power plants are located. Communities that understand and prepare for these changes will position themselves to adapt to the economic impact and strengthen their economy for the future.

The Iowa Environmental Council commissioned Iowa State University Extension in late 2020 to analyze the economic, fiscal, and social impacts of coal plants on the communities where they are located to provide communities with vital information for planning.

In 2010, coal-fueled power plants generated 72 percent of Iowa's electricity consumption. By 2020, only 22 percent was produced using coal. The trend is accelerating. This year, Alliant Energy announced plans to eliminate all coal-fueled power from its generation fleet by 2040. One factor among several is fuel cost. According to an electric utility representative who participated in this study: wind is free, coal is not.





Iowa is home to nine utility-owned coal-fueled power plants. Alliant Energy's Lansing, Iowa, coal-fueled power plant closes next year.

As Iowa's energy transition accelerates away from coal, communities where the power plants are located need to prepare today for the future.

This study analyzes the effects of Iowa's nine coal-fueled power plants based on five factors:

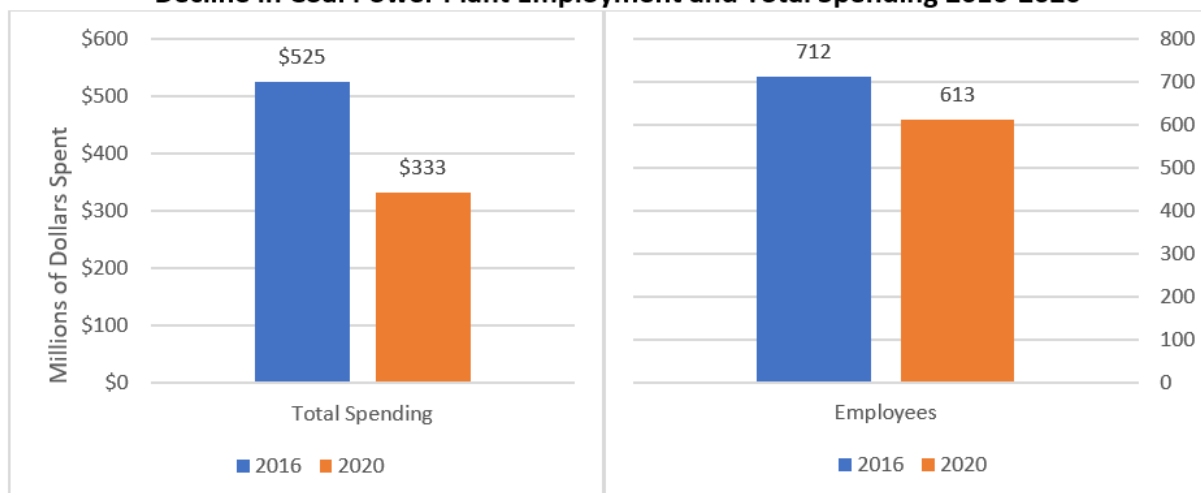
1. Economic impact analysis
2. Utility replacement taxes
3. Replacement jobs for power plant employees
4. Resident attitudes concerning the power plants
5. Insights from community leaders

Economic Impact

Using the Economic Impact Analysis for Planning (IMPLAN) model, we calculated the plants' effects on local spending and employment. The impact of Iowa's coal plants is significant, especially in rural counties, but their closure will not be devastating to their local economies. Proper planning can mitigate the impact of their loss.

In 2020, Iowa's nine coal-fueled power plants employed 613 workers. In addition to these direct employees, the nine power plants support a total of more than 1,376 positions outside the plants. Overall, this accounts for 0.54 percent of the total jobs in those counties.

Decline in Coal Power Plant Employment and Total Spending 2016-2020



Nearly 62 percent of reported expenditures at the plants were for primarily out-of-state purchases of coal, oil or natural gas, with 38 percent for all other purchases and salaries. Overall, the power plants support 0.48 percent of all economic activity in the eight counties included in this study, a total of just under \$370 million. This figure consists of local spending by the power plants, suppliers and employees.

Fiscal Impact

Local government budgets will also be impacted by the energy transition.

Counties, cities and school districts receive Utility Replacement Tax in place of property tax on utility property. Payments to local governments for coal-fueled power plants totaled more than \$9.6 million in the 2020-2021 fiscal year. On average, this accounts for 1.47 percent of total budgeted revenue for counties. The average percentage of revenues supported by the power plants is 2.90 percent for school districts, but the actual fiscal impact is difficult to predict. School funding is guaranteed at a minimum level per student by state law. However, schools may see reduced borrowing capacity, and taxes may rise on other property owners.

The local tax revenue impacts vary widely based on the size of the county. In relatively rural Allamakee County, the Lansing Power Station's utility replacement tax contributes 2.74 percent of county revenues and 8.61 percent of the Eastern Allamakee School District's budget. While in more urban Linn County, their power plant supports 0.16 percent of the county budget and 0.65 percent of the College Community School District's budget. Long-term budgeting is vital to mitigate the effects of any potential revenue losses.

Replacement Jobs

Employees at the power plants are the most affected by a potential closure.

To better understand their alternative employment possibilities, salary information for union employees in three power plants was analyzed. For most current employees, there are many possible replacement jobs in occupations that are close substitutes. The analysis shows jobs requiring similar skills are widely available in Iowa.

However, pay for power plant positions is much higher than pay in those substitute jobs. On average, the alternative positions identified paid less than 65 percent of the reported union wages. Although the total number of jobs in Iowa's coal-fueled power plants is relatively small, they play a significant part in these plants' economic and social impact.



Community Attitudes

Another critical aspect of plant closures is public concern. It is important to know what residents anticipate, even as those concerns do not always reflect the reality of the impact of plant closures.

More than 74 percent of survey respondents said the plant was “extremely” or “very” important to their local economies. Concerns about a potential closure varied by county. The top three concerns among survey respondents were job losses, 86 percent, higher utility bills, 80 percent, and tax payments, 67 percent.

Perceptions of job availability for displaced power plant workers differed widely among the counties. In Allamakee County, home to the Lansing Generating Station, 47 percent of respondents believed there wouldn’t be any local jobs available for displaced workers. Only 9 percent of respondents in Linn County thought that there would be no alternative employment in the area. Addressing this issue early in the process will be key to helping communities prepare for change.

Focus Groups

In addition to the survey, conversations were held with key stakeholders in each county that’s home to a coal-fueled power plant to gather additional context and detail.

In all communities, high-paying jobs were mentioned as a primary benefit of having the plants located in their communities. One elected official said the power plant jobs pay top-end salaries and union jobs are not plentiful outside the plants.

Local officials emphasized the fiscal benefits the Utility Replacement Tax provides for local governments. Schools with coal-fueled power plants in their district can levy lower property rates and have a greater ability to borrow. Business leaders added that the loss of local contractors, welders, pipefitters, janitorial, food service, etc., that serve the plant will have a ripple effect on the community and its economy.

Not all impressions of the plants in the communities were positive. Local officials and residents also expressed health concerns with regard to air and water pollution from the plants as well as noise pollution, traffic congestion, and student safety near schools in close proximity to railroad tracks used for coal transportation.

The majority consensus in all counties apart from Allamakee County, where the Lansing Generating Station is located, was that coal-fueled power plants would be an essential part of the electrical generation system for the foreseeable future. Overall, local elected officials and economic developers who participated in the study expressed skepticism about further closures. Several dismissed any discussion of closing coal-fueled power plants in the next 20 years as politically driven.



Preparing for the Future

Many factors are leading to reduced reliance on coal-fueled power plants in Iowa. Large industrial consumers increasingly expect clean energy sources for powering their operations. Environmental regulations have tightened, and renewable energy sources are more economical than fossil fuels. More closures will inevitably be announced in the coming years.

Although the Lansing Generating Station in Allamakee County is relatively small compared to other coal-fueled power plants in Iowa, it has, by most measures, the most significant impact on its local economy and government budgets. As local officials and business community members prepared for the plant's closure next year, they stressed the importance of planning early, continuous communication with the energy company and transparency with the public.

Fortunately, these communities are not alone. Over the past decades, the closure of many large coal-fueled and nuclear-fueled power plants across the country has taught valuable lessons on preparing for and coping with these events:

1. Communities should start early. Economic development requires local time, attention and resources. All might be in short supply after closure is announced.
2. A significant plant closure is a rare event. Connecting with peer communities that have gone through similar experiences can shorten the learning curve.
3. Think beyond redevelopment of the site. Long-term redevelopment of the location of the plant may be part of an economic recovery strategy. Still, the site's ownership, environmental remediation requirements, and existing infrastructure may make the site very difficult to redevelop quickly.

This study focused on the effects of existing coal-fueled power plants, but the energy industry supports many diverse jobs in Iowa in the transmission, renewables, and energy management sectors. Many of the communities included in this study already are home to new utility-scale solar and wind generation.

The changes in Iowa's electricity generation mix present challenges for communities with coal-fueled power plants. Potential losses to the local economy, jobs and government budgets are real but manageable. While local communities cannot change market forces and keep plants from closing, community leaders must understand these plants' effect on their community and prepare for what is next.

