Resilient Energy Economies

Fossil Fuel-Fired Power Plant Closures in the United States: Resident Experiences and Expectations

Emily Grubert — August 2026

Background

Closing fossil power plants means job losses or transitions, land use change, shifts in revenues, and pollution reduction for host communities. Understanding how residents experience these closures, and what they expect will happen as a result, can inform policy designed to smooth potential shocks and improve overall transition outcomes.

- The United States' fossil fuel-fired power plant fleet is aging— especially the coal fleet. Closures have been happening largely irrespective of policy interventions, with sometimes large impacts on host communities, especially in relatively small communities with limited advance notice of closure.
- A transition to a decarbonized energy system could be much more successful at eliminating greenhouse gas emissions if closures are planned and designed to avoid major economic shocks.
- Here, I present the results of a 20,000 household (response rate: 5.9 percent, 1,209 responses) saturation mail survey of residents proximate to 20 US coal and natural gas power plants in 17 states with an explicit (i.e., announced) or implicit (i.e., required by policy) closure deadline.[1] The survey asked residents what they expect the impacts of closure to be and what their preferred timeline for planning is, in order to inform more salient and effective planning interventions.

Key Findings

Residents near closing power plants anticipate both harms and benefits of closure, but respondents assume their communities will be affected more negatively than they are personally.

- When asked about the expected effects of plant closure, respondents expressed concerns about electricity reliability, the potential for local tax increases, and friends and family moving away, but also

1 The survey was generally delivered along the mail carrier route or routes comprising about 1,000 households closest to the power plant itself; actual distance varies, particularly in PO Box-only communities. The 20 power plants included in the survey sample are located in California, Colorado, Connecticut, Delaware, Illinois, Indiana, Massachusetts, Maryland, Michigan, Minnesota, New Mexico, New York, Pennsylvania, Tennessee, Texas, Utah, and Washington.

expressed excitement about reduced air pollution, lower noise, and not having to wait for coal trains while moving through town.

- When asked how closing the power plant affects "you," a majority of respondents (~60 percent) said things would stay the same or improve, even as a similar share (~60 percent) of respondents said things would get worse for their communities (Figure 1).
- Respondents who work or worked at the power plant are more likely to believe closure makes things worse both for themselves and their communities, but they similarly assume they personally are less negatively affected than the community overall (Figure 1).

State policy that requires power plant closure, but does not impose a specific closure date, has not yet translated to longer-term, local planning.

- Plants in the sample had closure deadlines that were either explicit (e.g., the plant owner has announced it, the plant is already closed) or implicit (e.g., state policy requires zero emissions by a given date).
- Less than 10 percent of respondents were aware that the nearby plant had closed, was scheduled to close, or was required to close in locations with implicit deadlines (e.g., due to Connecticut and Minnesota's legal mandate for 100 percent carbon-free electricity by 2040) compared with more than 80 percent for plants with an explicit deadline.
- State policy that presumably enables communities to spend 10 to 15 years preparing for a closure has apparently not yet prompted such preparation.

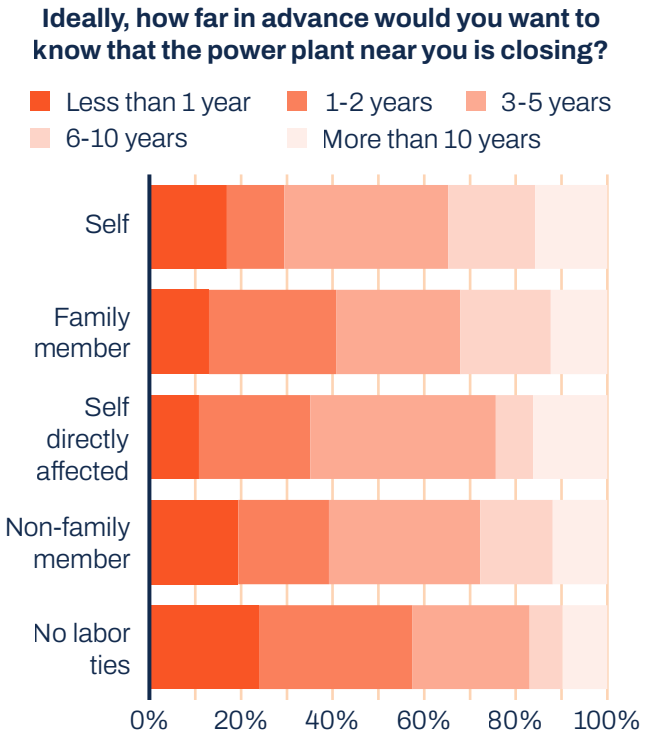
Figure 1. Expected impact of power plant closure on self and community, by labor ties to the plant

Note: "Plant workers" designates that the respondent works or worked at the plant.

Most respondents prefer advance notice of closure of five years or less.

- When asked how far in advance they would want to know that the power plant near them is closing, 75 percent of question respondents preferred to find out about closures within five years (Figure 2), suggesting that specific engagement with local residents on closure planning might be less effective on very long time horizons.

Figure 2. Preferred timeline for notice of power plant closure, by labor ties to the plant



Note: "Self" designates that the respondent works or worked at the plant, "family member" designates that the respondent has at least one family member that works or worked at the plant, "self directly affected" designates that the respondent does not work at the plant, but works or worked in a plant-dependent role, "non-family member" designates that the respondent has at least one close tie to a non-family member that works or worked at the plant, and "no labor ties" designates that the respondent has no close ties to plant workers.

- Yet, prior examples show that insufficient system-level planning, particularly for potential revenue replacement, can create major shocks. Respondents who work or worked at the power plants preferred more notice (Figure 2).

Not all power plant closures are salient for residents.

- This survey was designed to catch the attention of people who care a lot about the local power plant's future.
- The 20 power plants selected were in highly variable settings, from a town of less than 1,000 residents to New York City. Response rates across the 20 locations varied by an order of magnitude, from ~1 percent to ~13 percent, with very low response rates tending to be in highly diversified economies (e.g., New York City, southern California).
- Very high response rates tended to be from locations with a federal stop-closure order contemplated or issued by the time of the study.
- Low response rates might be correlated with fewer concerns about the potential impacts of power plant closure. (Because people tend to comment more when they want something to change, and because this survey addressed plants with a planned closure, we would not expect to see high response rates from people who support closure and do not believe the closure plan is threatened.)

Policy Implications

This study characterizes power plant closure planning preferences by people in host communities who are sufficiently engaged to respond to a survey clearly related to the local power plant. While their preferences might not represent the population as a whole, study results offer several implications for designing closure strategies:

- At the local level, there might be a "sweet spot" horizon for explicit, detailed closure planning (including community

engagement) of roughly three to five years prior to closure. This timeline preferred by respondents might not match the planning horizon necessary for delivering transition at a national or state level, or for more specific workforce planning.

- At the state level, setting binding emissions deadlines appears insufficient for activating local long-run planning for closure. Respondents in places with 100 percent zero-carbon electricity mandates for 2040 did not perceive their local power plant as affected.
- At the federal level, transition policies should recognize that the degree to which fossil power plant closures create challenges for their host communities is highly variable. Although all fossil power plant closures have implications for their workers, not all fossil power plant closures drive substantial fiscal or broader economic risks for their host communities. Federal policy design and transition cost estimates should account for this when designing policies such as bridge funding or capacity building.

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To learn more about my team's work on energy transitions, see group publications at emilygrubert.org/publications.

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About the Resilient Energy Economies Initiative

The REE Initiative was established in 2024 to develop strategies that support the economies of fossil fuel–dependent communities across the United States as the energy system transforms. In addition to supporting action-oriented research to find what works, REE has built a community of scholars, policymakers, and economic development practitioners from the local, state, tribal, and federal levels to share knowledge and build relationships across the nation's energy communities.

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