Can plant closures be an industry engagement opportunity?

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Introduction

At present, more than 20 commercial nuclear power plants in the United States have entered the decommissioning process, and many indicators point to a coming wave of additional plant closures. Indeed, with increasing numbers of plants terminating operations due to unfavorable market conditions, some voices have deemed this the "age of decommissioning."

Regardless of whether a plant shuts its doors earlier than anticipated or seeks a life extension through relicensing, all plants eventually close. When they do, the closure sets off a wave of economic impacts ranging from minor disruptions to severe and long-lasting harm.

New York's Indian Point-3 was scheduled to close in April 2021.

As noted in a recent report from the Nuclear Decommissioning Collaborative,[1] addressing these impacts is not within the Nuclear Regulatory Commission's jurisdiction and is not of formal concern to the licensee, and closure impacts have historically gone unnoticed outside the host community and perhaps the surrounding region. Recently, however, federal legislators have begun to pay attention.

This new attention has brought with it federal funds along with a parallel increase in host community capacity to more effectively plan for, and mitigate, the impacts of closure. The growing attention paid to closure impacts, combined with the increased engagement of host communities, presents the nuclear industry with an opportunity to better manage decommissioning project risks, strengthen its standing, and form new alliances even as the number of operating plants continues to decrease.

[1] *Socioeconomic Impacts from Nuclear Power Plant Closure and Decommissioning: Host Community Experiences, Best Practices, and Recommendations*, the Nuclear Decommissioning Collaborative, October 2020; decommissioningcollaborative.org/wp-content/uploads/2020/10/Socioeconomic-Impacts-from-Nuclear-Power-Plant-Closure-and-Decommissioning-15-October-2020-Final.pdf.

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California's Diablo Canyon is set to close later this decade.

Impacts of closure

The closure of a nuclear power plant impacts hundreds of highly skilled and well-paid workers, often a similar number of contractors, and the families of these workers. These staffing reductions soon carry over effects to the wider host community. For example, the 2013 closure of Wisconsin's Kewaunee Power Station meant the loss of approximately 650 jobs representing an immediate and direct annual impact to labor income of over $70 million and a total annual economic impact of more than $630 million to the surrounding region.[2] Similar economic impact figures have been developed for other plants: a 2019 report by the University of California–Berkeley estimates the annual economic loss from the closure of California's Diablo Canyon at $800 million,[3] once the two-unit plant is closed later this decade.

In addition to the loss of direct and indirect jobs, plant closure has a significant impact on municipal operating budgets through reductions in tax payments or similar allocations. For example, during the operation of New York's Indian Point, payments in lieu of taxes (PILOTs) accounted for more than 30 percent of the Hendrick Hudson School District budget and nearly 40 percent of the Village of Buchanan's total revenues. As a result of the upcoming plant closure, PILOTs to these entities will be reduced incrementally, reaching a 90 percent reduction in 2024 before expiring completely.[4]

[2] Views of the Future: Kewaunee, Manitowoc, and Brown Counties, Wisconsin, USA, Kewaunee County Economic Development, 2013; future-iq.com/project/kewaunee-regional-planning/.

[3] D. W. Roland-Host et al., *Prospective Closure of the Diablo Canyon Nuclear Power Plant: Economic Impact Assessment*, University of California–Berkeley, 2019; decommissioningcollaborative.org/wp-content/uploads/2020/07/FINAL_SB-968-Diablo-Canyon-Economic-Impact-Assessment.pdf.

[4] *Annual Report*, Indian Point Closure Task Force, 2018; decommissioningcollaborative.org/wp-content/uploads/2020/07/INDIAN-POINT-F8F80D6F-A7AA-4D29-A1E9-19B3F556D5B9.pdf.

Growing federal response

As the socioeconomic impacts of plant closure have become more widely appreciated, federal appropriators have begun to allocate funds to provide grants to communities to help them plan for and manage closure-related impacts. In fiscal year 2020, $15 million was appropriated for this purpose with an additional $17 million appropriated in FY 2021.

These funds are administered through the U.S. Department of Commerce's Economic Development Administration (EDA) under its Nuclear Closure Communities program.[5] While it is unknown what future budget decisions will be made, it is reasonable to expect that similar funds may be allocated in the coming years as more communities (and their elected officials) realize the need to make post-closure preparations.

Implementation

While the moniker "nuclear closure communities" implies that funds will be made available to plants that have closed or soon will close, all communities that currently host or have hosted a nuclear power plant are eligible for EDA funding. Economic planning grants support efforts in the following areas:

- Stakeholder engagement, communications, and visioning strategies.
- Land use, zoning, and housing stock assessments.
- Decommissioning impact analysis.
- Economic resiliency planning.
- Labor market studies.
- Underutilized sites and brownfields assessments.
- Economic development and diversification strategies (both local and regional).
- Scenario development.
- Workforce retraining.
- Fiscal hotspot analysis.

Successful grant applications clearly demonstrate the linkage between plant closure and socioeconomic impacts. To this end, applicants (generally local economic development agencies) benefit from access to plant employment data commonly held by the utility, including demographics, commuting information, and compensation ranges. The size of EDA grants varies with project scope, but federal awards of $300,000 to $500,000 are not uncommon. The EDA program also requires the applicant to demonstrate the availability of matching funds, which vary and can bring the total for a typical planning project into the $500,000 to $1 million range. Follow-on awards from the EDA are possible for more capital-intensive projects (i.e., infrastructure) to further promote job growth and long-term economic recovery.

[5] "EDA Seeks Applications to Support Nuclear Closure Communities," U.S. Economic Development Administration, May 11, 2020; eda.gov/news/blogs/2020/05/11/Nuclear-Closure-Communities.htm.

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Initial outcomes

The first outcome arising from federal funding to nuclear closure communities is that socioeconomic impacts from actual or potential plant closure are delineated. This baseline information then allows for plans and programs to be developed to chart a course toward economic recovery and resiliency. Oftentimes, EDA funding is used to hire a resiliency coordinator to manage the multiple dimensions of the project and engage external consultants as necessary.

In addition to program development, as a collateral outcome of participating in the grant process, the host community forms new partnerships with a broad range of local, state, and regional stakeholders to assist in application development and project implementation. We see these partnerships form within communities around the country, including Benton Harbor, Mich. (Palisades); Vernon, Vt. (Vermont Yankee); and San Luis Obispo, Calif. (Diablo Canyon).

A by-product of these partnerships is a corresponding increase in community capacity, awareness, and influence. While this increased capacity is generally applied toward traditional efforts to mitigate socioeconomic impacts (planning and studies as outlined above), we also see the emergence of a new host community strategy—namely, the communities' growing efforts to advance socioeconomic objectives by seeking to gain economically from the decommissioning project itself. To that end, the question that community leaders are now beginning to ask is, "How can a billion-dollar project in our community help us advance our objectives?"

Paths to influence

To answer the preceding question, community leaders first turn to the key actors in the decommissioning project itself: the regulator (the NRC), the utility, and/or the decommissioning contractor. Local leadership soon realizes, however, that they have little or no role in the decommissioning process and that addressing their economic development goals falls outside of federal regulatory jurisdiction and beyond the scope of the licensee.

The local officials then take their message of socioeconomic recovery to the traditional forum for decommissioning stakeholder engagement, commonly referred to as community advisory boards (CABs). However, when it comes to economic development in the wake of closure, CABs tend to mirror the federal regulatory position and choose not to engage on this topic as it is generally deemed out of scope and, therefore, not on the agenda for discussion.

At this point, community leaders have choices. If they do not receive a receptive audience at the CAB, they may shift attention away from the larger task of influencing decommissioning project outcomes and return their focus to pursuing traditional economic development initiatives.

Another option for community leaders, however, is to affect decommissioning project outcomes by leveraging their partnerships and relationships outside of the CABs. Diablo Canyon provides a recent example. There, a wide range of local, state, and federal stakeholders have agreed to work together under a memorandum of understanding[6] to advance their economic development goals. The establishment of this alliance is a clear signal that confining advocacy within the CAB process is not viewed as productive.

Industry opportunity

Regardless of how communities advance their objectives, economic recovery and resiliency have become permanent fixtures of nuclear power decommissioning. While this creates an increasingly complex landscape of stakeholders, motivations, and advocacy strategies, it also presents industry with opportunity. The nature of this opportunity is twofold: increased ability to better manage project risks and long-term industry positioning.

From a risk management perspective, the existence of an organized and engaged stakeholder cohort (local leaders advocating for economic development) creates a ready-made strategic partnership opportunity. By engaging early with local economic development representatives and supporting the EDA grant process, the licensee is viewed as advocating for the long-term health and welfare of the community: the very community that has hosted the licensee's operations for decades. This partnership helps to diffuse animosity regarding the closure decision and build goodwill both locally and throughout the plant owners' portfolio locations. In addition, the creation of a local ally yields demonstrable benefits in facilitating state permitting

[6] Memorandum of understanding dated March 4, 2021; reachcentralcoast.org/wp-content/uploads/Diablo-MOU-signed.pdf.

requirements associated with decommissioning. A simple monetization of the resulting schedule savings yields a considerable return on the partnership investment.

The goodwill generated in support of decommissioning can then be leveraged to advance longer-term industry objectives. While there is much talk about the promise of advanced reactors, siting a new reactor will prove challenging. It is no secret that the proposed locations for this new generation capacity are on sites corresponding to the existing fleet. Given current decommissioning project experiences, however, it would be unwise for the nuclear industry to assume that it will be welcomed back with open arms.

An informal survey of community-based decommissioning project stakeholders and their elected officials would indicate that the nuclear industry is not universally held in high regard. In particular, the ongoing economic disruptions and legacy aspects of closure are perceived as not worth the economic benefits from the plant's operation. While there are as many opinions as there are stakeholders, the voice of the chairman of the town of Carlton (home to the Kewaunee Power Station) provides a cautionary tone: "The town would have been better off all these years without the plant."[7]

Conclusion

Building constructive relationships around local economic development efforts enables the nuclear industry to advance short-term business interests (reduced decommissioning project risk) and leverage these partnerships to achieve long-term strategic objectives (receptive sites for new builds). In this context, the nuclear industry would do well to operationalize these partnerships into their industrywide closure and decommissioning programs. Efforts currently underway by industry to develop guidance regarding license termination planning and execution present a perfect window of opportunity to advance business goals through socioeconomic impact mitigation.

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[7] "Rural Wisconsin Community Laments Nuclear Power Plant's Closure," *New York Times*, August 11, 2015; nytimes.com/2015/08/12/us/rural-wisconsin-community-laments-nuclear-power-plants-closure.html.