PLANNING FOR THE LOCAL IMPACTS OF COAL FACILITY CLOSURE: EMERGING STRATEGIES IN THE AMERICAN WEST

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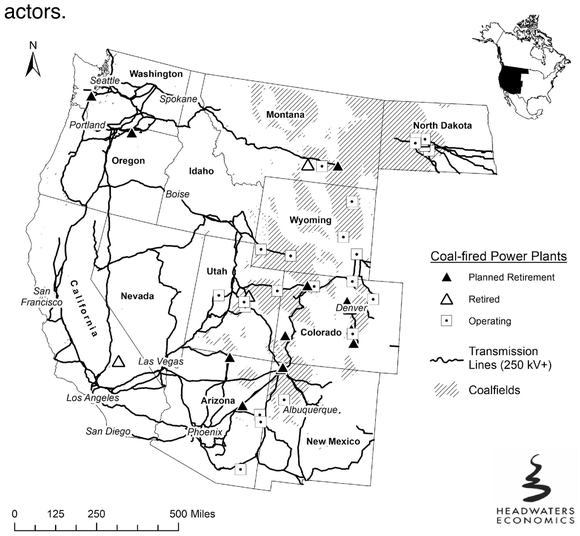
ABSTRACT

This study examines the coal transition in the United States from the perspective of planning responses to coal plant retirements in the U.S. West. Plan closures in the region affect a diverse set of geographies and have developed in a complex, uncoordinated policy environment. The study applies an assessment framework informed by economic geography and community planning scholarship to a dataset of 12 planning documents written by and for local communities experiencing coal facility closures. The findings highlight the absence of effective strategies to address lost local revenues, lack of connections between environmental quality and long-term economic resilience, and a range of levels of acceptance of the coal transition. Together, the plans demonstrate the negative consequences of an uncoordinated, contradictory policy environment for transition planning at the local level and the need for policy interventions to address issues of equity and efficiency in this process.

REGIONAL CONTEXT

The West's coal plant communities are facing transition in a way that is distinct from other regions. The current complex policy and stakeholder landscape was highly influenced by the political and physical geographies of the West's energy system and the process in which it was constructed. In the 1970s, there were three main drivers for rapid energy expansion in the West: energy independence, demand for low-sulfur coal, and increasing energy demand from West's metropolitan areas. Over the next 20 years, there was a vast expansion of electricity infrastructure (MAP 1). Through the 1980s and 1990s, electricity markets were deregulated and introduced competition and shifting ownership and regulatory responsibility from states to market and private actors.



MAP 1 (above) Coal Resources and Coal Electricity Infrastructure in the U.S. West

APPROACH

Identify Coal Plant Closures and Plans

Deregulation of the electricity markets and re-regulation in several states has led to a disjointed and fragmented policy and ownership regime. In the West, we have identified 18 coal-fired power plants, with 32 individual owners of various types, such as, investor-owned utility company, independent power producers, cooperatives, and municipal owners. Each type of owner is guided by different incentives that influence decisions about the end of life processes of these plants. ***This leaves the community in a constant state of uncertainty about if and when plants may close. Of the 18 coal plants in the west, 11 of those communities have formal plans that address the coal plant closure.***

Characterize by Economic Geography

Closures are playing out across a diverse economic geography in which local opportunities vary widely based on access to markets via airports, and presence of amenities associated with the growing service economies. Rasker et al. (2009)'s Three West's typology in which counties are metropolitan, connected, or remote as measured by mean driving time to airports. ***Of the 11 plants identified in our study, six are located in an county isolated from markets (Figure 1).***

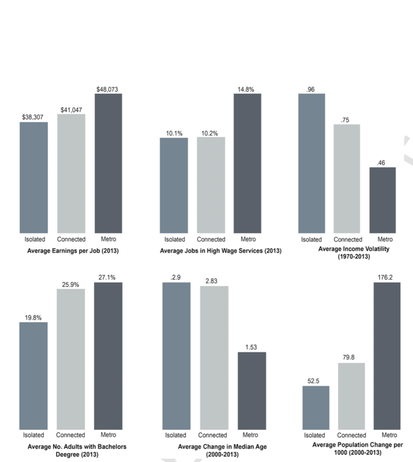


Figure 1 (above). Socio-economic indicators suggest major differences in potential vulnerability of the county cohorts to the loss of a coal-fired plant. Compared to metro counties, average wages are lower in isolated counties, there are fewer jobs in high-wage services, and income volatility is greater.

Evaluate Plans

Pulling from bodies of scholarship in economic and rural geography, sociology, and community resilience, we have identified four essential transition strategies to be applied in the planning process.

FOUR ESSENTIAL TRANSITION STRATEGIES

1. ***Importance of replacing and stabilizing revenue streams***
2. ***Necessity to plan, fund, and complete environmental remediation***
3. ***The risk of focusing on economic development strategies inappropriate to local context***
4. ***Association of willingness to change and positive outlook with community resilience during transitions.***

PLAN EVALUATION (N=12)

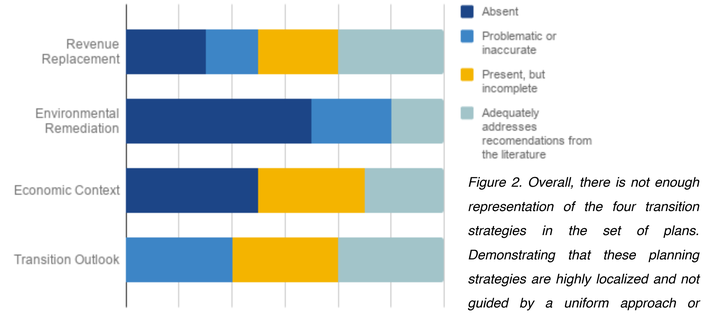


Figure 2. Overall, there is not enough representation of the four transition strategies in the set of plans. Demonstrating that these planning strategies are highly localized and not guided by a uniform approach or template.

Tax Revenue Replacement

One major finding of concern is that there are no dedicated transition funds available at the outset of planning. Some plans address in detail the level of dependency on the tax revenue and employment from the plant but they do not offer a strategy to replace those funds.

Environmental Reclamation

Less than half of plans address environmental remediation, if they do they tend to focus on short-term employment opportunities. Failure to integrate restoration into long-term goals.

Economic Context

Most plans address opportunities and limitations relative to economic geography and remote locations make commercial redevelopment of industrial facilities unlikely. Emphasis in some plans on comparative advantage, identifying local assets associated with a high quality of life, access to outdoor recreation, and industrial capacity. However, strategies often focus on retaining or attracting a single large employer, often another polluting industry.

Outlook

Mixed perspectives on outlook, about 1/3 demonstrate a positive outlook (willingness to change) and another 1/3 are explicitly resistant to planning. Early acceptance of post-coal future allows more time and resources to employ proactive planning efforts.

REFERENCES

Rasker, R. Gude, P.H., Gude, J.A., van den Noort, J., 2009. The economic importance of air travel in high-amenity rural areas. J. Rural Stud. 25, 343-353.