

# Accepted Manuscript

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PII: S0095-0696(16)30390-4

DOI: [10.1016/j.jeem.2018.02.002](https://doi.org/10.1016/j.jeem.2018.02.002)

Reference: YJEEM 2105

To appear in: *Journal of Environmental Economics and Management*

Received Date: 23 October 2016

Revised Date: 28 January 2018

Accepted Date: 4 February 2018

Please cite this article as: Linn, J., Muehlenbachs, L., The heterogeneous impacts of low natural gas prices on consumers and the environment, *Journal of Environmental Economics and Management* (2018), doi: 10.1016/j.jeem.2018.02.002.

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# The heterogeneous impacts of low natural gas prices on consumers and the environment\*

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## Abstract

We show that low natural gas prices increase gas-fired electricity generation, reduce coal-fired electricity generation, and reduce wholesale electricity prices. However, not all regions experience the same degree of coal-to-gas generation switching or electricity price declines. Specifically, regions experiencing more coal-to-gas switching experience smaller electricity price drops. We provide intuition that may explain this pattern. This finding also has environmental and welfare consequences: coal-fired plants emit more pollutants, and therefore regions that benefit more from greater emissions reductions experience lower benefits from declining electricity prices. The finding highlights a mechanism through which a carbon price would have heterogeneous impacts across regions.

*JEL Classification Numbers:* Q41, Q53

*Key Words:* Electricity Prices, Natural Gas, Coal, Cost Pass-Through, Pollution, Shale Gas

\*Linn: University of Maryland, College Park and Resources for the Future, Washington DC; Muehlenbachs: University of Calgary and Resources for the Future. We are particularly grateful to Yushuang Wang who worked on this project as a research assistant at Resources for the Future. We also thank Steve Cicala, Karen Fisher-Vanden, Laura Grant, Catie Hausman, Beat Hintermann, Kelsey Jack, Dan Kaffine, Cathy Kling, Theodore Kury, Jacob LaRiviere, Molly Macauley, Erin Mansur, Nicholas Li, Karen Palmer, Anthony Paul, Lucy Qiu, Lilei Xu, and participants at the AERE Summer Conference, Arizona State University, Colorado School of Mines, IIOC, University of British Columbia, and University of Michigan, for comments and suggestions, and the Heising-Simons foundation for funding. An earlier version of this paper was circulated as “Do Low Natural Gas Prices Benefit Electricity Consumers or the Environment?”

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