

# Do manufacturing plants respond to exogenous changes in electricity prices? Evidence from administrative micro-data

Kathrine von Graevenitz\* and Elisa Rottner†

April 28, 2022

## Abstract

Climate policy often implies increasing energy prices. Due to incomplete regulation across the globe, concerns about competitiveness and employment effects play an important role in the policy debate. Using micro-data on electricity network charges and the official plant census data for Germany, we study the impact of rising electricity costs on plant performance in German Manufacturing. Electricity network charges are determined through regulation in Germany and therefore exogenous to each individual manufacturing plant, while making up a substantial share of final electricity prices. We find evidence of negative own-price elasticities for electricity both in the long- and in the short-run. A one cent increase in average network charges leads to a decrease in electricity procurement of roughly 3 %. We do not find any significant effects on revenues, investments or capital stocks.

**Keywords:** Network charges, Electricity Use, Firm Performance, Climate Policy, Manufacturing

**JEL-Classification:** D22, L60, Q41, Q48

---

\*ZEW – Leibniz Centre for European Economic Research, and University of Mannheim, Email: von-graevenitz@zew.de.

†ZEW – Leibniz Centre for European Economic Research, and University of Basel, Email: rottner@zew.de.