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“Wind Turbine Shutdowns and Upgrades in Denmark: Timing Decisions and the Impact of Government Policy”

This paper develops a dynamic structural econometric model of wind turbine owners' decisions about whether and when to add new turbines to a pre-existing stock, scrap an existing turbine, or replace old turbines with newer versions (i.e., upgrade). We apply our model to owner-level panel data for Denmark over the period 1980-2011 to estimate the underlying profit structure for wind producers and evaluate the impact of technology and government policy on wind industry development.