

Holding Up Green Energy

Abstract

Green energy is produced by specific assets that are vulnerable to hold-up if contracts are not strictly enforced. I study the role of counterparty risk in the procurement of green energy using data on the universe of solar procurement auctions in India. The Indian context allows clean estimates of how risk affects procurement, because solar power plants set up in the same states, by the same firms, are procured in auctions variously intermediated by either states or the central government. I find that (i) the counterparty risk of an average state increases solar energy prices by 9% and (ii) central intermediation eliminates this risk premium. Higher prices due to risk will reduce investment when demand is elastic. I quantify this effect in a sample of auctions where buyers set explicit ceiling prices. The imposition of ceiling prices reduced capacity procured by 16%, and the quantity of foregone investment increases steeply in the degree of counterparty risk. The results suggest that the risk of hold-up places developing countries at a disadvantage in the procurement of green energy.