Abstract: This paper examines the effects of regulations and market structures of the electricity markets in the United States (US) and the European Union (EU).
Following Russia's invasion of Ukraine, the world has experienced a global energy crisis that has caused electricity prices to soar. We show that market design policies in the EU have created a tight connection between gas and electricity prices and their volatility that have resulted in a large increase in the collateral for longer maturity futures and forward contracts. We document a significant increase in EU electricity price volatility following the squeeze in the gas market that resulted in almost 50% increase in the average value of collateral required for one year European futures contracts. This created a huge cost for power utility companies that required a hedge for their exposure to electricity price risk. We show that the cumulative returns of a portfolio of EU power utilities was as much as 122.3% (and 86% on average) lower than and a portfolio comprised of US power utilities counterparts.