The Winner's Curse in Offshore Wind Auctions: An Experimental Comparison

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Abstract:

The Biden Administration's recently announced sale of new offshore wind leases is intended to address U.S. climate goals of expanding renewable energy in the next decade. The United States currently employs a simultaneous ascending clock auction to allocate offshore wind leases, in contrast to the United Kingdom's multi-phase design including (1) a multi-round discriminatory auction to allocate the leases and (2) a 'contract for difference' reverse auction to guarantee a revenue per megawatt hour of electricity produced. The United Kingdom's design is advertised as decreasing uncertainty for clean energy producers in an industry susceptible to the winner's curse. Contrary to the intention of the design, I find in a series of experiments that the U.K. auction mechanism results in higher propensity of the winner's curse, but no significant differences in revenue. Beyond an experimental setting, these results have implications for improving offshore wind lease auction design and encouraging growth in the renewable energy industry.