# Article information:

Implications of variations in renewable cost projections for electric sector decarbonization in the United States - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S2589004222006630?via%3Dihub>

# Article summary:

1. This article surveys the U.S. wind/solar costs and models electric sector decarbonization impacts to understand how cost reductions could alter electric sector planning decisions and costs under deep decarbonization.

2. The analysis compares recent projections of solar and wind costs across published studies for the U.S., and uses an energy systems model to evaluate how these assumptions about technological change for renewables and energy storage could translate into electric sector costs and planning decisions.

3. Results indicate that policy decisions have a larger influence on future trajectories than wind and solar cost reductions, which have more limited impacts on deployment of carbon removal technologies and the capacity of clean firm technologies in reaching net-zero emissions in the electric sector.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article “Implications of variations in renewable cost projections for electric sector decarbonization in the United States” is a comprehensive analysis of the potential impacts of renewable energy cost reductions on electric sector decarbonization strategies in the United States. The authors survey existing projections of U.S. wind and solar costs from different organizations, develop improvement curves based on percentage changes from a common base year, use an energy systems model to evaluate how these assumptions about technological change for renewables and energy storage could translate into electric sector costs and planning decisions, consider different policy targets, timeframes, and technology costs, examine trends in capacity factor and O&M, use natural gas price assumptions from the U.S Energy Information Administration’s Annual Energy Outlook (U.S EIA), consider annual electricity demand from REGEN’s end-use model, etc., to arrive at their conclusions regarding the impact of renewable cost reductions on electric sector decarbonization strategies in the US.

The article is well-researched with detailed information provided regarding all aspects considered by the authors while conducting their analysis as well as clear explanations provided for each step taken by them during their research process which makes it reliable as well as trustworthy source of information regarding this topic. Furthermore, no promotional content or partiality has been observed while reading through this article which further adds to its trustworthiness as a reliable source of information regarding this topic.

However, there are some points that should be noted when considering this article's trustworthiness such as its lack of exploration into counterarguments or alternate perspectives which may exist regarding this topic or its lack of consideration for possible risks associated with implementing certain policies or strategies discussed within it which may limit its reliability when

# Topics for further research:

* Renewable energy cost reduction strategies
* Electric sector decarbonization policies
* Impact of renewable energy on electricity demand
* Capacity factor and O&M trends
* Natural gas price assumptions
* End-use energy models

# Report location:

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