
ABOUT OUR SPEAKERS



David Brown, Ph.D.

David Brown is an Associate Professor at the University of Alberta's Department of Economics. He holds a Canada Research Chair in Energy Economics and Policy and is the President of the Canadian Association for Energy Economics. David received B.S. degrees in Quantitative Economics and Mathematics at Miami University (Ohio) and an M.A. and Ph.D. in Economics from the University of Florida.

His research lies at the intersection of energy economics, industrial organization, and regulatory policy. He has published over two dozen articles in journals including the *Journal of Industrial Economics*, *International Journal of Industrial Organization*, *The Energy Journal*, *Resource and Energy Economics*, *Energy Economics*, and *Canadian Journal of Economics*, among others. His recent research considers questions related to electricity market design, market power execution in wholesale and retail electricity markets, designing regulations to motivate utilities to invest in cost-effective distributed energy resources, and analyzing the impacts of compensation policies on renewable investment.

Electricity Market Design: Preparing for a High Renewable Resource Future

Keynote Address | Friday, April 16, 2021 | 1:30 p.m. CST

Location: <https://go.tamtu.edu/whtc-keynote-brown>

Renewable resources such as wind and solar power continue to grow rapidly worldwide. In 2021, these resources are projected to reflect 70% of all new large-scale generation capacity additions in the United States. This growth is driven by numerous forces, including government policies targeted at reducing greenhouse gas emissions and cost reductions of up to 90% in the last decade due to innovation and learning-by-doing.

While these technologies provide numerous economic and environmental benefits, they also come with significant challenges for the electricity sector. The intermittency (variability) and zero-marginal cost nature of these technologies magnify existing obstacles and alter the historical operations of electricity markets. The difficulty of overcoming these barriers is magnified by the increasing frequency of extreme weather events such as the recent winter storm in Texas. In addition, the growing movement for increased electrification of heating and the transportation sector will heighten the importance of ensuring a low-cost, reliable, and resilient electricity sector.

This presentation will discuss the ongoing debates over the design and regulation of wholesale electricity markets in a high renewable energy resource future. The discussion will focus on traditional and evolving market designs and regulatory policy. Dr. Brown will discuss market reforms to energy-only markets, such as Texas's electricity market, to achieve a reliable supply of electricity that is resilient to extreme weather events and increased electrification.