



RAL SEMINAR SERIES

Economic Impact of Improved Wind-Energy Forecasts from Improved Versions of the HRRR

DAVID D. TURNER

Senior Scientist, NOAA Global Systems Lab
Manager, NOAA/OAR Atmospheric Science for
Renewable Energy Program



Wednesday, September 4, 2024

1-2 PM (MT)

HYBRID MEETING FL2-1022 | [Watch Live](#)

Economic Impact of Improved Day-Ahead Wind-Energy Forecasts Realized by Improvements to the High-Resolution Rapid Refresh (HRRR) Weather Prediction Model

The High-Resolution Rapid Refresh (HRRR) weather prediction model is run by the National Weather Service and provides foundational weather forecasts for the wind energy community. This model is updated regularly with new versions, as they improve the data assimilation and physics via field experiments and analysis. Here, I present an economic impact assessment of the difference between HRRR v1 and v2, and v2 and v3, from a land-based wind perspective. The results demonstrate that the newer model version, due to its more accurate forecasts, would save the energy community over \$200M per year, and would provide over \$100M per year savings for household income.