

Serving up renewable energy

December 17 2020, by David Bradley



It is the first time that data has been used at a national scale to judge how the beauty of the environment impacts onshore windfarm development. Credit: CC0 Public Domain

As decisions about nuclear power installations, wind farms, solar plants, and other energy sources are being discussed, new research published in the *International Journal of Business Continuity and Risk Management*,

reviews how the contribution of renewables to the utility energy mix might be maximized.

Roy Nersesian and Joseph McManus of the Leon Hess School of Business at Monmouth University, West Long Branch, in New Jersey, U.S., suggest that solar and [wind power](#) represent major challenges to energy providers. The main issues are the fact that the sun does not always shine and the wind does not always blow and sometimes when it does, it blows too hard. As such, solar and wind cannot reliably displace fossil fuels nor nuclear in the present climate, as it were.

The team has therefore developed a generalized methodology that could be employed to more effectively incorporate renewables such as solar and wind and others into the conventional energy mix for electric utilities in light of this. The potential for pumped storage facilities is there to stabilize [electricity generation](#) based on renewable, however, as well as helping ensure the reliability of services utilizing currently available technology.

Pumped storage could very well represent a major approach to storing electricity generated by wind or solar, or indeed any other method. The electricity is regenerated by a hydroelectric facility on demand. The team does point out that technology is advancing all the time and while pumped storage is a very effective approach, chemical storage, as in rechargeable batteries, may well become more efficient and more viable where creating a reservoir is not possible with sufficient advances in that area.

More information: Roy Nersesian et al. Maximising the contribution of renewables in a utility energy mix, *International Journal of Business Continuity and Risk Management* (2020). [DOI: 10.1504/IJBCRM.2020.111770](https://doi.org/10.1504/IJBCRM.2020.111770)

Provided by Inderscience

Citation: Serving up renewable energy (2020, December 17) retrieved 14 June 2024 from <https://techxplore.com/news/2020-12-renewable-energy.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.