

Environment - Environmental Impact; New Data from University of Texas Austin Illuminate Research in Environmental Impact (Comparative Life-Cycle Assessment of Electricity-Generation Technologies: West Texas Case Study)

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2024 MAR 15 (VerticalNews) -- By a News Reporter-Staff News Editor at Energy Weekly News -- Investigators discuss new findings in environmental impact. According to news reporting from Austin, Texas, by VerticalNews journalists, research stated, "This comparison of five power plants in West Texas is intended to provide various decision-makers and stakeholders with a holistic picture of the life-cycle environmental impacts associated with these power plants."

Financial supporters for this research include comparing Electricity Options, Industrial Affiliates Program of The **Bureau of Economic Geology** And The Jackson School of Geosciences, The University of Texas At Austin.

Our news correspondents obtained a quote from the research from University of Texas Austin: "A key contribution of this analysis is that we assumed all power plants generate the same amount of electricity over a 30-year life, taking a 500 MW combined-cycle gas turbine (CCGT) plant as a benchmark. Also, in two cases, we added battery storage to wind and solar PV facilities to render them nearly as dispatchable as the CCGT. We included the entire supply chain supporting electricity generation, which encompassed raw material sourcing, processing, manufacturing, operations, and product end of life, also called cradle to grave. We report on 18 environmental impacts using ReCiPe midpoint (H) impact assessment. The supply chains are global, and impacts are felt differently by host communities across the world."

According to the news reporters, the research concluded: "The results can help stakeholders identify hotspots across numerous supply chains with the highest environmental impacts. We discuss some remedial measures and challenges to inform future analysis by the research community."

For more information on this research see: Comparative Life-Cycle Assessment of Electricity-Generation Technologies: West Texas Case Study. Energies, 2024,17(5). (Energies - http://www.mdpi.com/journal/energies). The publisher for Energies is MDPI AG.

A free version of this journal article is available at https://doi.org/10.3390/en17050992.

Our news editors report that more information may be obtained by contacting Jani Das, **Bureau of Economic Geology**, Jackson School of Geosciences, University of Texas Austin, Austin, TX 78712, United States. Additional authors for this research include Atta Ur Rehman, Rahul Verma, Gurcan Gulen, Michael H. Young.

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