Insight Medical Publishing

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2020

Journal of Environmental Research

Vol.4 No.1

IDEA: what does an energy transition look like?

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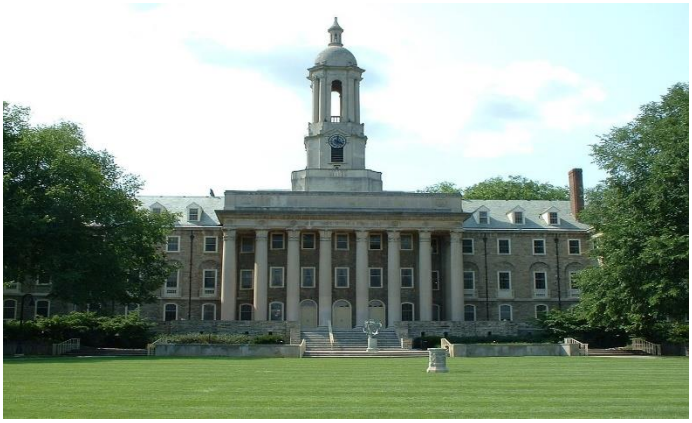
Abstract

Recently, the Intergovernmental Panel on Climate Change (IPCC) releasedthe most specific report to date about the implications of climate change.In short, the report forecasts that the 2020s could likely be our species' lastchance to mitigate or modify the changes being caused to Earth's climate.Chief among the contributors to this pattern is modern humans' excessive useof energy, particularly the reliance on fossil fuels that began in the late 19thcentury. What do we do with such information? I am a historian working withother international scholars to study patterns of energy use in the human past.By focusing our inquiry on energy exchange which is an intrinsic facet of thehuman condition, our efforts join with scientific findings such as those of theIPCC to provide one possible response to this quandary: our future depends on atransition from fossil fuels and it will not be the same as any past energy shifts.Drawn from ideas of Vaclav Smil and others, the presentation will capture the new, complex understanding of energy that must be at the core of our current transition. To do so, the author will briefly discuss primary transitions in the last150 years so that he can spend the bulk of my comments describing how this one must be different. In short, this transition must be conceptual rather than a leap between resources. Often, the thinking goes that previous transitions grew from the discovery or adoption of new sources of power or technology. This, however, is largely a panacea created through hindsight. In nearly every case, cultural and social will drove the marketplace in new directions while still utilizing previous modes of power during a time of transition that extended for years and even decades. Energy transitions are no simple flip of a new "switch! In fact, the foundational change in thought, fuelled by the IPCC report is just the kind of plunk in the Center of the proverbial pond that sends ripples of transition outward. Vested interests may counter those ripples of change, but they can't stop them if the facts continue to shape the cultural and social will. In this case, the author argued that using the new war chest of knowledge requires a fundamentally new way of thinking about energy that began in the 1970s. Global energy crisis of the 1970s allowed developed nations to achieve the basic reality that energy sources were not infinite. Since then, the lessons of climate change have given us new criteria by which to select our sources of power. As Smil and others have directed, energy choices can no longer be based purely on false ideas of abundant supply and low price.The calculation must now include availability of supply and technology but also the costs of production and outcomes. By organizing our selection of resources in this fashion, we can control the speed of our transition while reaching a more sustainable goal..

Biography:

Brian C Black is a Distinguished Professor of Environmental Studies and History at Penn State Altoona, where he also currently serves as Head of the Division of Arts and Humanities. He is the Author and Editor of several books, including the award-winning "Petrolia: The Landscape of America's First Oil Boom" (Johns Hopkins, 2003) and "Crude Reality: Petroleum in World History" (Rowman & Littlefield,2014). He has contributed essays to more than twenty books and is the Editor of a number of others, including the four-volume Climate Change: An Encyclopedia of History and Science (ABC-Clio, 2013).In addition, he has served as one of the editors of Spring 2012 special issue of the Journal of American History on "Oil in American Life," which was inspired by the 2010 Gulf Oil Spill. His articles have appeared in many journals, including Environmental History, Reconstruction, Pennsylvania History, Civil War History, Landscape, and the Journal of American History. In 2016, West Virginia University Press launched the Energy and Society book series with Black as editor..



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Speaker Publications:

5th World Summit Climate Change and Global Warming;
Amsterdam, Netherlands- February17-18, 2020.

Abstract Citation:

Brian C Black, IDEA: what does an energy transitionlook like?, Climate 2020, 5th World Summit Climate Change and Global Warming Chemistry; Amsterdam, Netherlands- February17-18, 2020).