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100% Clean, Renewable Wind, Water, and Solar Roadmaps for 139 Countries of the World

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Abstract Body:

Significant prior research has focused on the health, climate, and other environmental and social impacts of gas and aerosol particle emissions from fossil fuel and biofuel combustion. Given the magnitude and costs of the impacts, large-scale conversions of these fuels to non-emitting sources of energy are warranted. This talk discusses technical and economic roadmaps to convert the energy infrastructures of each of 139 countries of the world to those powered by 100% non-emitting wind, water, and sunlight (WWS) for all purposes, namely electricity, transportation, heating/cooling, industry, and agriculture/forestry/fishing, after energy efficiency measures have been accounted for. These roadmaps are developed with a methodology similar to that recently derived for each of the 50 United States. Reliability of 100% WWS systems is crucial. To that end, results showing the ability of the United States to maintain a 100% reliable grid with a 100% WWS system are discussed as well. Please see <http://web.stanford.edu/group/efmh/jacobson/Articles/I/WWS-50-USState-plans.html> for more information.

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