

The Biden Climate Plan and Power Blackouts

J. David Aiken

Professor, Water and Agricultural Law Specialist
Department of Agricultural Economics, University of Nebraska—Lincoln

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President Biden is committed to slowing and reversing global warming. Two major climate plan objectives are: (1) 100% zero emission electricity by 2035, and (2) increasing electric vehicles (EVs). Both Ford and GM are already committed to moving most passenger and light truck vehicle production to EVs by 2035. The biggest challenge will be making the US electricity system 100% clean energy.

The Biden clean electricity plan has yet to be announced, although the Biden infrastructure plan will fund improving electricity system reliability, to avoid the rolling blackouts we experienced in the Great Plains this February. The biggest challenge is how to move our current electricity system, from 63% of fossil fuel generation – from coal (23.4%) and natural gas (38.4%) – to zero emissions by 2035. We need a clean electricity system for an EV-based transportation system to also be clean. Driving EVs powered by fossil fuel generated electricity won't get us to net zero emissions. So a clean electricity system is fundamental to a cleaner transportation system and a cleaner economy.

The Biden clean electricity plan probably will use national clean electricity requirements to reach zero emissions by 2035. Every electricity generator would have to meet increasingly clean generation requirements from say 2022 to 2035. Currently 63% of US electricity is fossil fuel based, and 37% comes from renewable generation (17%) and nuclear generation (20%). So in year 2022 the clean electricity requirement might be 35%. If the clean energy requirement is increased 5% each year, it will reach 100% by 2035. This means most utilities will be getting more of their electricity from wind, solar, and nuclear power over time.

What if a utility comes up short on clean electricity? This is where clean energy credits come in. Utilities who generate more clean electricity than is required would get credits for its “excess” clean electricity. “Clean” generators could sell credits to “dirty” generators not meeting the clean electricity requirement. So, a “dirty” generator with 30% clean electricity when 40% is required could buy clean energy credits to get to 40%. Over time clean “dirty” utilities would build more wind, solar and nuclear generating facilities, moving the US closer to 100% clean electricity by 2035.

Will we be able to avoid electricity blackouts with a 100% clean electricity system? Yes but we must plan for it. The 2021 Texas power blackouts were caused by poor system planning, and Texas grid top managers have either resigned or been fired. Improved electrical transmission will make it easier to move power from one part of the country to another. Improved energy conservation will reduce overall power demand, and electricity storage systems will provide power even with no sun shining or wind blowing. It won't be cheap or easy, but we can achieve a clean energy economy by 2050 if we all work together to accomplish that.

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