

The COVID pandemic has provided a vivid picture of what happens when ill-prepared governments are suddenly hit with huge responsibilities. Underfunded state and local public health agencies were overwhelmed, while governors and local officials found themselves struggling to obtain and distribute vital supplies, from respirators to vaccines. Efforts to accelerate the transition away from carbon, such as a green stimulus, may run into similar problems if we neglect the agencies that will have to implement policies.

People tend to think of the energy transition in terms of wind turbines, solar panels, batteries, and charging stations for electric vehicles. That can presumably be accomplished through mandates to utilities or financial incentives. The trouble is that all of these changes have to function in connection with a power system that wasn't built to accommodate them. That requires careful planning to ensure that the system remains robust and reliable. Energy regulators in California, New York, Texas, and some other states are in a good position to deal with those problems. Even those states will have to ramp up their efforts as the federal government push the transition faster. But the energy transition has to reach beyond the vanguard states. Energy regulators in many other states have very little experience in dealing with such rapid changes in the grid. The first-movers on climate change have been affluent states whose agencies tend to be well funded. Less affluent states may struggle to fund the needed expansion in agency expertise. If they don't get help, they'll be forced to rely on their utilities for information and planning, which is far from ideal.

The problem isn't just limited to the state governments. A significant amount of the country is served by regional cooperatives or publicly owned utilities rather than the private sector, and these power providers may also find themselves short of the expertise they need. Universities across the country might be funded to help provide training but also to provide state-specific research to assist local institutions. They will need funding to expand their focus on clean energy, in an era when electrical engineers typically work on microchips not power grids.

The federal government ought to be thinking about grant programs to help these various institutions build capacity. Other capacity-building efforts might include training programs and financing information exchanges between states.

As the Biden Administration looks to rev-up clean energy, this funding need should not be forgotten. The amount of money is minor compared with current government spending on clean energy, let alone what we might see from a green

recovery bill. Without this funding, however, there's a risk that lack of institutional capacity might become a serious bottleneck to decarbonizing the economy.