Investor-owned utilities supply almost three-quarters of U.S. electricity. With some notable exceptions, they've tended to drag their feet on the energy transition. In order to push the transition forward, we need to get them on board. This post will try to diagnose the problem and sketch some possible remedies.

The proposed Clean Energy Standard is one effort to deal with this problem. I'll explain later how it fits into the analysis.

The Problem. Utilities may resist the transition for several reasons. Utilities are very familiar with how to run their current systems, and dramatic changes would pose new challenges. Long-distance transmission projects may imperil a utility's control over its local power markets. A big shift to renewables could leave stranded assets — existing fossil fuel plants that the utility will no longer get paid for using.

Addressing foot-dragging by utilities is complicated because of the complexity of the regulatory landscape. Some states have restructured their power sectors by forcing utilities to sell off generators and buy power in wholesale markets. In much of the country, those wholesale transactions are under the control of regional transmission organizations established by federal power regulators, but that's not true everywhere. Finally, conventional utilities face new competitors such as community power aggregators.

In those states where rates are regulated, regulators can do some things to shift these incentives. In many of the states where we most need utilities to take action, however, state regulators have little interest in taking those steps — partly because they're often under the thumbs of the utilities. Thus, the utilities are part of the problem, and their regulators are another part.

We need to recognize this as a key problem in managing the energy transition. Here are some possible means of addressing it — using the sticks and carrots at our disposal.

Sticks. The most effective sticks are those allowing the least room for delay tactics. Putting a substantial price on carbon would do the job. That doesn't seem to be politically feasible at the national level, at present. The other alternative is for Congress or an agency like EPA to impose mandates on the industry.

New EPA regulations — say something like Obama's Clean Power Plan – would certainly be helpful. New regulations leave a lot of room for delay in administrative and legal proceedings. Moreover, EPA will have to trim its sails to avoid having its regulations sunk by the conservative Supreme Court. Getting the strongest regulations we can is absolutely

necessary, but it won't do the whole job.

It looks likely that the Clean Energy Standard will have a stick in the form of a tax on utilities that feel to achieve annual increases in their use of renewable energy. At this point, the ultimate form of the standard remains unclear, as are its chances for enactment through the Senate reconciliation process.

There are other possible sticks. Reducing production of fossil fuels or making it harder to transport to users would raise prices and deter reliance on those fuels. Another possibility would be to provide less favorable tax treatment for fossil fuel plants. Regulations of other forms of pollution from power plants such as particulate emissions, heat pollution in water bodies, or coal ash disposal could force companies to choose between expensive new investments or shutting down the plants.

Carrots. That brings us to carrots. How can we make utilities more willing — and ideally, enthusiastic — about the steps that need to be taken, mainly new transmission lines, shuttering fossil fuel plants, and building out renewables?

In states that support climate action but have traditional utility regulation, performance-based regulation can be tweaked to take environmental performance into account. Essentially, firms meeting aggressive environmental benchmarks would get to earn a larger profit. The problem with this approach, however, is that it may not work in the states where we most need to incentivize the utilities. Those states often have conservative governments that won't be interested in providing this kind of incentive.

Another option is to throw a lot of money at utilities in the form of federal subsidies. The current infrastructure bill does this for long-distance transmission. Subsidies are also likely to be part of a potential Clean Energy Standard, which would reward companies for achieving the mandated annual increases in use of renewable energy.

Subsidies of this type have their greatest impact in competitive power markets. Subsidies may also make it harder for state regulators to resist new projects that would otherwise benefit ratepayers. On the other hand, some of the benefit of the subsidy could be passed on to utility customers. That may be a good thing, but it doesn't give the shareholders and their corporate managers an incentive to increase renewables. How things play out may depend on the size of the subsidy, the economics of the utilities, and the response of state regulators to the subsidies.

An alternative is to focus on utility executives rather than the utility as a corporate entity.

For instance, we could give favorable tax treatment to execution option plans where the value of the option depends on hitting environmental benchmarks. It would also be great to have some big prizes for executive of the companies taking the biggest steps toward modernizing and reducing their emissions. Nothing like a bonus or recognition to get an executive's creative juices flowing.

Utility regulators are often leery of authorizing investments in new technologies. They worry that shareholders will be stuck with the tab if the utility's investment doesn't pan out, while successful investments will benefit the industry as a whole rather than simply the customers of that one utility. Regulators should consider ways of decreasing the risk to utility customers, either by finding ways to shift risk to non-utility investors in joint ventures or by putting the entirely on the utility in return for a higher rate of return on the project if it succeeds.

Hybrids. Hybrid policies offer positive treatment to good actors and negative treatment to bad actors. This is an automatic feature of carbon pricing systems, which is one argument for using them as part of a comprehensive climate policy. It's also a likely feature of the potential Clean Energy Standard, which as discussed above would likely contain both a subsidy and a tax.

Another hybrid policy involves corporate governance. Steps to increase shareholder pressure on utilities would both reward utilities with stronger climate records and punish those without. Activist shareholders need to make utilities a priority. Financial regulators can take steps to improve corporate disclosure of climate-relevant information and support shareholder activism.

What I've provided here is just a sample of possible techniques. The most important thing is to identify utility incentives as a problem and start focusing on solutions.