On the macro level, just about everyone is a big fan of a rapid, aggressive build-out of new long-distance electric transmission lines – to help meet the anticipated rapid growth in demand for electricity due to the electrification of transportation and energy use in buildings, and the growth of AI. In addition, new big bulk power lines could help move renewable power from sunny and windy places to other locales where the power is needed. On a micro level, we all know that transmission lines are ugly and disruptive, unsafe, and maybe even unhealthy.

So, how can we strike the proper balance – building the lines we need, and only the lines we need? That's where proper planning comes in.

During the Biden years, DOE and FERC worked intensively on finding ways to encourage better transmission planning and – by extension – better integrated planning. A new study, produced by Berkeley Masters in Public Affairs candidate Diane Moss, makes sense out of the tangle of pleadings, studies and orders stemming from those efforts at the federal level. Moss is also a Founder and Director of the Renewables 100 Policy Institute and an independent consultant who has served in many capacities in Los Angeles, in Congress, and in other countries.

Of course, transmission lines don't work in a vacuum. They are part of what needs to be a balanced, synchronized, reliable electric grid. The grid, with all of its poles and wires and generators, is one big machine. And because of the outsized effects of our energy consumption, decisions about how to design and maintain the grid can either interfere with or further important environmental and social goals. We want a grid that is consistent with all of our interests – from cheap reliable power to an equitable economy, clean air, and a stable climate.

The challenge is that our earnest focus on transmission build-out could lead to results that don't support a low-cost, balanced energy strategy. While the majority of states declare that they look at energy planning in an integrated way, most don't give a fair shot to all of the options for responding to predicted energy demand. Sometimes, growth in demand is best served by building new lines to bring in power from other places. Sometimes it makes more sense to build new generators close to the customers or take steps to encourage those customers to become more energy efficient or use less power during peak periods. Sometimes it might make better sense to deploy more solar and wind power. Sometimes, we need more storage capability ensure that power is available when people need it.

Part of what militates against truly integrated planning is that transmission providers usually produce their own separate plans and all transmission providers in a given region

are supposed to develop regional plans. The Federal Energy Commission (FERC) requires those regional transmission plans and the U.S. Department of Energy has the responsibility to identify National Interest Transmission Corridors (NIETCs). Within those corridors, FERC has the authority to approve new lines when states fail to do so. It is predictable: ask transmission companies to develop plans and they will usually say that the answer is to build more transmission.

FERC appears both to recognize the value of integrated planning and to understand how the agency's push for regional transmission plans might get in the way. In its first order mandating regional planning, FERC included a footnote voicing its intent not to interfere with state-based integrated plans. In its more recent orders, the agency has offered more avenues for incorporating the results of integrated plans into the regional transmission planning process. An opportunity missed, however, was for FERC (or DOE, or both) to sponsor a national conversation about how to make state-based plans more thoroughly integrated. Recent analysis, as reported in Diane Moss' informative paper, suggests that most state plans fall well below the mark in terms of considering all viable options for addressing demand, and that no state, shall we say, has hit the ball out of the park. The opportunity remains for federal regulators to set higher planning standards and encourage their adoption. FERC's current chair — a former state regulator himself — sees the importance of effective planning. One can always hope…

Even within the unstable policy environment in Washington D.C. right now, this new study is up-to-date and a valuable resource for those who want to know what has transpired related to better grid planning and the challenges that remain.