



Clean Energy Innovation Roundtable Series

Summary:

Session IV: Clean Electricity Standard

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On April 29, the Aspen Institute Energy & Environment Program virtually convened the fourth in its 2021 series of Clean Energy Innovation Roundtables. This convening brought together experts to discuss the design and political realities of a clean electricity standard (CES), as well as other complementary climate policy needs. This summary captures some of the key topics of discussion.

Design of a Clean Electricity Standard

The Biden Administration has been promoting the concept of a Clean Electricity Standard, but it has provided few details. Likewise, Democrats in Congress have proposed various CES ideas that differ in numerous respects. The design details of a CES matter.

A CES has to be designed to be effective, and the relevant goals and timetables have shifted over the years. A few years ago, the conversation was about 80% clean by 2050, which became 100% by 2050, and now 100% by 2035 (which has recently been coupled with 80% by 2030). The ambition and timetable have moved steadily forward. Aspiration and ambition are good, but the goals also have to be possible. Early modeling suggests there may be challenges with the more ambitious targets, as systems' costs may reach the thresholds for alternative compliance payments before reaching the targets.

It is also important that a CES be tech-inclusive. There are debates about which technologies should be included in a CES, but the conversation has largely moved in the direction of inclusivity. Most major proposals include renewables, existing hydro, existing and new nuclear, carbon capture and storage, and direct air capture. The inclusion of nuclear within a CES will improve nuclear power's prospects, as it currently is not valued for the 24/7/365 carbon-free generation it provides. The role of natural gas in a CES is a topic of contention. Some want gas excluded, while others want it to receive partial credits; modeling suggests that partial credits for gas achieve more reductions, faster, at lower cost.

There is some contention as well around including direct air capture and other forms of carbon dioxide removal. Net-zero emissions is an economy-wide goal, but it may not be the goal for the power sector, where existing technologies can achieve deep reductions in the near term and where there are plausible newer technologies to get the sector to actual zero in the long term. The removals that will be necessary to achieve economy-wide net-zero may be better reserved for harder-to-abate emissions outside the power sector, though the door can be left open to using them in the power sector if it turns out that advances in other sectors make emission reductions there more feasible and/or the last emissions in the power sector prove to be very costly to eliminate. Rural electric co-ops may also benefit from having access to removals to offset their emissions, though rural communities may not actually be that hard to decarbonize (especially with targeted infrastructure investments). In addition, there may be no technological pathway to achieve an actual-zero target by 2035 (versus 2050), so removals will be needed to achieve that more aggressive target.

A historic concern about technology inclusiveness has involved crediting existing resources, which can create wealth transfers between regions that are leading on clean energy and ones that are further behind. However, different baselines can be established for different regions. Differentiated baselines allow a CES to work for both heavily clean and heavily emitting states, as it allows entities to make progress from where they are, not relative to other parts of the country. The best CES proposals, by using regionally differentiated baselines, are also careful about how they credit sources to encourage ones that actually yield decarbonization benefits as opposed to add to saturated parts of the grid. A CES should focus on transforming grids where more clean energy is needed, not on overcrowding parts of the country's grid already well-stocked with clean energy; clean energy resources and jobs should be located everywhere and close to local loads.

Technology inclusiveness can expand the political base of support and improve the political economy for a CES. For example, unions do not see themselves having lots of jobs building wind and solar, but they do see jobs in nuclear, hydrogen, and other technologies. At least three different types of small modular reactors could be built by the end of this decade and could be sited to replace coal plants, and there is a high degree of job transferability between the two. Indeed, the new tech that is coming will matter a lot in changing the political economy of action.

To decarbonize the grid on aggressive timeframes, there is a need to not just promote an inclusive set of clean resources but also to drive unabated emitting assets off the system. There is no shortage of capital in the market that wants to invest in clean energy; the market failure is in getting the legacy emitting assets off the system early. A CES can do that, by creating positive incentives for the generation of clean power and by requiring anyone selling power that is not 100% clean to purchase credits, which is basically equivalent to a fee for emitting. There are regulatory challenges involved in pushing emitting assets off the system, and public utilities commissions and ratepayers are very sensitive to stranded assets and the costs they have to carry for retiring them early, but those challenges need to be worked through to create a glide path for the exit of old emitting assets.

Beyond the key criteria of a CES being effective and ambitious in reducing emissions, being tech-inclusive, being geographically fair, and addressing air quality in local disadvantaged communities, there can be lots of flexibility, creativity, and optionality in how to design a CES. A CES also should not undercut the work that big energy buyers have done to help drive clean energy on the grid; it is important to figure out how to have a CES that does not shut down voluntary markets.

In addition, it may not be feasible to expect a nationwide CES to work while having well-functioning markets for clean energy only in some parts of the country; expanding wholesale markets across the country should be part of the conversation from the start. This could help keep costs down, ensure access to clean energy in a broader geographic range, and promote innovation, competition, and meeting of customer needs. On the other hand, expanding wholesale markets can create risks if the Federal Energy Regulatory Commission (FERC) under some future administration once again pursues more aggressive preemption of state policies; federalizing some aspects of energy policy could prove to be a devil's bargain that is later regretted. Beyond market expansion, market reforms are also needed, but conversations about market reforms (and transmission) at FERC and about a CES in Congress are not currently connected at all.

Politics of a Clean Electricity Standard

Along with the other essential criteria for a CES that have already been mentioned, a key one inherent in getting a CES passed through Congress is political viability. In 2009-10, following the failed Waxman-Markey cap-and-trade proposal, there was a slimmed down CES proposal that still hit a political brick wall (even with Democratic control of the Senate). Legislative cycles tend to be about 8-10 years, but the current conversation around a CES in the United States suggests there are still significant political viability constraints.

There are two paths being discussed for a CES (or a CES-like policy) in Congress: regular order (which will require bipartisan support) and budget reconciliation (which will require only majority support). Regular order is preferable for many reasons. Tackling climate change will require decades of sustained effort, and environmental policy has only ever been durable through regular order – though there are examples in other areas (e.g., Obamacare) of partisan policies that have so far proven to be durable. Regular order also allows more flexibility in finding alignment and addressing concerns. While there are benefits to a CES being bipartisan and moving through regular order, that is not where the conversation is heading at the moment. A lot of the conversation now is about adopting something through budget reconciliation; while that may not look like a traditional CES, it may be the only road forward, though it is not clear that there are 50 votes for a reconciliation approach either.

Pursuing an entirely partisan approach may be fraught in the long term. If the Republicans retake the House in 2022, it is hard to overstate the degree of anger they will have if an entirely partisan CES-type measure is pushed through, and government shutdowns and significant partisan efforts to dismantle the policy become possibilities. On the other hand, the potential outcome of the 2022 elections cuts the other way as well; the sense in the Democratic caucus is

that now is the opportunity to act, and there seems to be little prospect of securing support from 10 Senate Republicans for a CES within the next year or so.

Getting to “yes” on a regular-order CES will involve difficult, long-term conversations to build as broad a base of support as possible – and would have to start with Sen. Manchin (D-WV) and Sen. Barrasso (R-WY), the Chairman and Ranking Member (respectively) of the Energy Committee. A CES that is satisfactory to both of them – assuming one exists and that it is also satisfactory to the rest of the Democratic caucus – could pass with more than 80 votes in the Senate. Such a CES – in addition to being sufficiently ambitious – would have to address some of the concerns fossil fuel states have about an energy transition. For example, fossil-dependent states rely on the money from fossil fuel production to fund schools and other government programs; an answer has to be found for these states of how else to fund schools and fill budget holes – or some role must be kept for the fossil fleet and fossil production. There seems to be close to no direct engagement occurring between high-level Democrats and Republicans on the Hill on this topic, though, and a bipartisan approach cannot be found without that.

If the reconciliation route is pursued, the policy has to involve federal budget outlays and revenue flows, which is antithetical to the original notions of a CES. There are many design possibilities (e.g., feebates) to fit something into reconciliation, but whatever it is will look starkly different from a CES that goes through regular order. Feebates or other mechanisms that might make it through reconciliation should not be called a CES unless there are enforceable limits on pollution; calling a reconciliation approach a CES might ruin the chances of getting a real CES (and probably will not help with the parliamentarian either). Still, a CES-like policy adopted through reconciliation can be designed to effectively reduce emissions and, whether through a fee, alternative compliance payment, or other approach, to push dirty power off the grid.

Complementary Policies

A CES is not the end-all. It is one policy in a portfolio of climate-related measures at all levels of government. For example, the Biden Administration has increased the social cost of carbon – which can be a benchmark for informing policy – back to where it was under the Obama Administration (which had updated the Bush Administration number), and there is a process underway to update it by early 2022. Permitting modernization that is smart, safe, and speedy is also needed to be able to move at the pace the climate crisis demands; a simplified, accelerated permitting regime to get stuff built faster could have bipartisan support. Carbon border adjustments are being discussed as well, particularly in the European Union, because countries want to take action on their own without having their emissions leak elsewhere and losing their competitive advantage. It is not clear that the United States can implement carbon border adjustments without having a carbon price in place.

Complementary measures also include tax credits, which played a large role in the transformation of the wind and solar industries. Tax credits provide an additional positive incentive for clean energy deployment (though they need to pair with a clean energy

performance standard or some other policy that penalizes emitting assets to achieve the quickest emissions reductions). Sen. Wyden (D-OR) has introduced a proposal that would simplify clean energy tax credits, make them tech-inclusive, and expand the market participants that can utilize them. The Wyden bill would essentially convert a CES from an unfunded mandate to a funded one (though perhaps not from a budget scoring perspective).

In addition, while the country should be able to reach 80% clean energy relatively quickly, the last 20% will be harder, requiring additional policies to support new clean dispatchable technologies and to invest in the transmission system. Funding for research and development (R&D), for example, is a critical down payment for needed future technologies and should be increased. Both deployment of existing technologies and R&D for new technologies are needed, but a focus on new technologies cannot just be a political excuse to avoid taking significant actions in the present.