

OVERVIEW OF CLEAN ENERGY STANDARD PROPOSALS IN 116th CONGRESS

THE CLEAN FUTURE ACT

The CLEAN Future Act is draft legislation proposed by House Democrats to move the United States to a 100% clean economy by 2050. The Act establishes a nationwide clean energy standard (CES) requiring all electricity suppliers to obtain 100% clean energy by 2050. Suppliers will provide an increasing supply of clean energy starting in 2022 and must possess a sufficient quantity of “clean energy credits” at the end of each year or will be required to make an “alternative compliance payment.” Suppliers may buy and trade clean energy credits from one another or purchase them via auction.

Clean Energy Definition and Credit Assignments:

The CES proposes defining “clean energy” or “qualified energy” as electricity generated at a facility with an annual carbon intensity lower than 0.82 metric tons of carbon dioxide (CO₂) equivalent per megawatt-hour.

Credits will be assigned to generators based on carbon intensity, provided the unit’s carbon intensity is lower than the 0.82 metric ton threshold. Non-emitting resources would receive one full credit per MWh of energy generated. Qualified resources whose emissions are below 0.82 metric tons of CO₂e/MWh would receive a partial credit based on the unit’s lifecycle emissions.

Compliance Obligations:

The baseline for each utility would be based on the “average percentage of the electric energy consumed by all electric consumers of the retail electricity supplier that is qualified energy during calendar years 2017, 2018, and 2019.” This target would increase annually on a constant percentage point from 2022 until 2050.

Alternative Compliance Payments and Credit Trading:

Utilities without a sufficient quantity of clean energy credits (CECs) at the end of each year are required to make an “alternative compliance payment”. Suppliers may buy and trade clean energy credits from one another or purchase them via auction. The payment starts at \$22 in

2022 and gradually increases until it reaches \$64 in 2050.

THE CLEAN ENERGY STANDARD ACT OF 2019 (S. 1359, H.R. 2597)

This plan establishes a federal CES to put the U.S. on a path to net-zero electricity emissions by midcentury. This legislation would also establish a CES credit trading market. The Act amends the Public Utility Regulatory Policies Act (PURPA) to require retail electricity suppliers to reach 90% clean energy by 2040 and 100% by 2050.

Clean Energy Definition and Credit Assignment:

Clean energy is defined broadly with different technologies - depending on their carbon intensity - receiving compliance credits. Zero-carbon resources receive a full federal energy credit (FEC) and low-carbon resources receive partial FECs.

Eligible clean resources receive a full FEC:

- Wind, solar, storage, biomass, hydro, nuclear, waste-to-energy, low-carbon fuels, combined heat and power, and fossil-fired facilities with CCS.
- Low-carbon resources receive a partial FEC:
 - Low carbon is defined as <0.4 metric ton / MWh
 - Approximately half of existing NGCC are estimated to receive ~1/8th of a FEC
- New Technologies are eligible for FEC multipliers:
 - Innovation credit multiplier is given to “new dispatchable low-and zero-emissions technologies”
- Energy Efficiency does not receive FECs:
 - 75% of ACP funds are refunded to states for EE programs and bill reduction for low income households

Compliance Obligations:

Retail electricity suppliers are required to increase their share of clean energy by 2.75 percentage points per year above their “baseline percentage” until they reach 60% after which their annual rate of increase would be 1.75 percentage points.

- Small retail electricity suppliers would have an annual clean energy percentage growth rate of 1.5 percentage points above their baseline percentage.
- If a retail electricity supplier achieves a clean energy percentage of 90 percent before 2040, no additional increases in its share of clean energy would be required until after 2040; at which time the annual clean energy percentage



growth rate would be one percentage point up to a maximum of 100%.

Alternative Compliance Payments and Credit Trading

The Act requires the Secretary of Energy to develop a process for determining and executing the program, including a national clean energy credit trading program. It also allows for three compliance pathways - Federal Energy Credits (FECs), behind-the-meter generation, and Alternative Compliance Payments (ACP)

- FECS - Zero-emitting resources would receive one full federal clean energy credit for every MWh of electric energy generated. Low-carbon technologies could receive partial credit if the resource's carbon emissions intensity is below 0.4 metric ton of CO₂e emitted per MWh.
- ACP - ACP would start at 3 cents per kWh (or \$30 per MWh) and increase 3% annually plus inflation through December 31, 2029, and by 5% annually plus inflation beginning on January 1, 2030, and each year thereafter.

CLEAN ENERGY INNOVATION AND DEPLOYMENT ACT

The legislation creates a federal clean-energy standard that would require electricity providers to fully eliminate their net carbon emissions by 2050.

Clean Energy Definition and Credit Assignments:

Clean energy includes wind, solar, storage, advanced nuclear, carbon capture and storage, electric vehicles, and energy efficient building technologies. The CES will be completely neutral in its treatment of non- and low-carbon electricity-generation technologies – providing credit to renewable energy, nuclear power, natural gas, fossil/CCS sources, and any power generating source to the extent that it emits less CO₂ than an efficient coal-burning power plant.

Compliance Obligations:

Starting in 2022, utilities would be required to submit an increasing amount of zero emission energy credits (ZEECs). The baseline for each utility would be based on 2018-2020 zero emission levels by each utility. By 2030, each utility will need to meet a 50% carbon emission reduction target. By 2050, each utility will be required to meet a 100% reduction in carbon emissions. Between 2024 and 2050, a utility will be required to increase its percentage of ZEECs evenly on an annual basis.



Alternative Compliance Payments and Credit Trading:

All ZEECs are tradeable so one utility may trade ZEECs to another. If ZEECs increase in price more than currently projected, utilities are allowed to purchase ACPs. The ACP price would start at \$20/ZEEC and increase evenly on an annual basis until it reaches \$62 in 2050.

MCKINLEY-SCHRADER DISCUSSION DRAFT PROPOSAL

On September 17, 2020, U.S. Reps. David B. McKinley, P.E. (R-W.Va.) and Kurt Schrader (D-OR) released legislative draft language for their bipartisan energy and climate proposal. The proposed legislation establishes a federal CES that requires utilities to purchase clean energy in increasing amounts over time to achieve emissions targets (80% CO₂ reduction by 2050).

Clean Energy Definition and Credit Assignments:

Clean electricity credits will be issued to each electricity generator that has sold electricity and has an annual carbon intensity of less than 0.825 metric tons per megawatt-hour. Allows for two pathways to credit assignment:

- The first bases clean credits on the number of megawatt-hours of energy sold from the generator and the annual carbon intensity
- The second is a dynamic crediting methodology that calculates the displaced CO₂ emissions of clean energy resources

Compliance Obligations:

Beginning in the first compliance period, each utility is to surrender the clean energy credits according to the required percentage. The Secretary of Energy will determine the required percentage each year.

Alternative Compliance Payments and Credit Trading:

A utility that fails to submit adequate clean electricity credits will be required to pay an amount equal to the product of the alternative compliance payment for that year (times the number of clean electricity credits that were due in the compliance period). The alternative compliance payment for the first year is set at \$30 per megawatt hour, increasing by 5% each year. The legislation also requires the clean electricity credits to be tradeable and the credits may be banked for future use.

