45ZCF-GREET – 2026 Change Log

45ZCF-GREET (Rev. June 2026)

The 45ZCF-GREET (Rev. June 2026) model and associated User Manual implements the following changes relative to 45ZCF-GREET (Rev. May 2025, Amendment):

For all pathways:

- The dependency file, which is used to run backend calculations, has been updated to use R&D GREET 2025 Rev. 1 to utilize the most recent available data and assumptions.
- Behind-the-meter electricity has been separated into two different user inputs: “Onsite Behind-the-meter Electricity: Integrated” and “Onsite Behind-the-meter Electricity: EAC”.
- Results for all pathways are presented for fuels produced in 2025 and for fuels produced after December 31, 2025, to reflect policy changes from the One Big Beautiful Bill Act.
- 45V modeled Hydrogen inputs have been changed to 45Z modeled Hydrogen inputs. Users must use the Hydrogen Production pathway in 45ZCF-GREET to model Hydrogen as a process fuel before inputting consumed Hydrogen data in other pathways.
- Changed “Pipeline CMM” to two new fields: “45Z Modeled CMM” and “45Z Modeled CMM CI”.

For Coal Mine Methane (CMM) Capture and Upgrading:

- Change in flaring efficiency in background counterfactual calculations from 99.85% to 98%
- Addition of Carbon Capture and Sequestration (CCS) parameter
- Addition of multiple CMM upgrading technology options
- Renamed ‘Final CMM Pressure’ field to ‘CMM Pressure Exiting Upgrader’

For Renewable Natural Gas (RNG) pathways:

- Addition of Carbon Capture and Sequestration (CCS) parameter
- Renamed ‘Final RNG Pressure’ field to ‘RNG Pressure Exiting Upgrader’
- Addressed numerical instability in the RNG pressure field

For Hydrogen Production:

- A toggle has been included to model Hydrogen as a process fuel or transportation fuel.

For RD/SAF from Corn Stover via Gasification and FT:

- Added corn stover moisture content as a user input

For Ethanol from Corn Stover via Fermentation:

- Added two selectable pretreatment methods: Dilute Acid (DA) and Deacetylation and Mechanical Refining (DMA)

For Ethanol from Wet Mill Corn via Fermentation:

- Changed name of “Corn Hydrozylate Production” to “Hydrolyzed Corn Protein”

The following policy changes from the One Big Beautiful Bill Act are reflected in the model outputs and clarified in the User Manual for fuels produced after December 31, 2025:

- Deduction of Indirect Land Use Change (ILUC) contributions
- The pathway for RNG from [Generic] Animal Manures via Anaerobic Digestion may no longer be used; pathways for specific species must be established
- Ineligibility of feedstocks sourced from outside of the United States, Mexico and Canada
- A comment has been added to total LCA results for fuels produced after December 31, 2025: “After Dec. 31, 2025, certain feedstocks and pathways may not be used, and negative values may no longer be claimed for some fuels. Refer to the user manual for more information.”
- A note has been added to CI input cells: “Negative CIs are not valid for process fuels produced from non-manure sources that are consumed in the production of transportation fuels produced after December 31, 2025. Please refer to the user’s manual for additional information.”

45ZCF-GREET (Rev. May 2025, amendment)

The 45ZCF-GREET (Rev. May 2025) model was amended to address the following:

- The coal type parameter is added to the transesterification production pathways to biodiesel.
- The sample input data for wet mill ethanol is updated to be consistent with those in R&D GREET 2024 Rev1.
- Addresses an error in calculating emissions associated with corn stover input in the corn stover ethanol pathway.
- Implements a validation to prevent users from entering negative values for input parameters that are not expected to be negative.

45ZCF-GREET (Rev. May 2025)

The 45ZCF-GREET (Rev. May 2025) model and associated User Manual implements the following changes relative to 45ZCF-GREET (Rev. January 2025):

- Added pathway for alternative natural gas from coal mine methane (CMM) capture and upgrading.
- Added pathway for ethanol from U.S. corn wet mills. A simplified plant-level allocation by mass is applied to derive the results for ethanol. The same indirect emissions value per MJ for dry mill corn ethanol is applied to wet mill ethanol.
- Added text to the GREET User Manual to quote Notice 2025-11, sec. 401 to clarify that these (and potential future) model updates, including new types, categories or pathways, may be used immediately.
- Clarifies in the GREET User Manual that Carbon capture utilization and sequestration (CCUS) allow CO_2 stored in U.S. Class II wells used for enhanced oil recovery (EOR), in addition to Class VI wells. (Note: No changes to model only revisions to user manual.)