
OLR Bill Analysis

HB 5440

AN ACT CONCERNING LIFECYCLE GREENHOUSE GAS EMISSIONS OF BIOFUELS.

SUMMARY

This bill requires the Department of Energy and Environmental Protection (DEEP) to use the Argonne National Laboratory's greenhouse gases, regulated emissions, and energy use in technology (GREET) model, or a successor model, in certain DEEP analyses and planning documents.

Specifically, it requires DEEP to measure lifecycle greenhouse gas emissions using the GREET model in any report or inventory the DEEP commissioner publishes that analyzes or models greenhouse gas emissions (e.g., DEEP's greenhouse gas inventory) used to develop recommendations to make progress towards the state's greenhouse gas reduction goals.

Existing law requires DEEP to monitor low-carbon fuel standards in other states or jurisdictions and evaluate their potential to achieve net carbon reductions. Current law requires the department to assess whether the analytical framework used to determine any standard's carbon benefit measures the full lifecycle of greenhouse gas emissions. The bill instead requires DEEP to use the GREET model to analyze the full lifecycle of greenhouse gas emissions.

The bill also requires DEEP to use the GREET model for various analyses required under its Comprehensive Energy Strategy (CES).

EFFECTIVE DATE: October 1, 2024

GREENHOUSE GAS INVENTORY

Existing law requires DEEP to develop a schedule, every three years,

of recommended regulatory actions by relevant agencies, policies, and other actions needed to show reasonable progress towards achieving greenhouse gas emissions goals set in state law (see BACKGROUND). The bill requires any report or inventory DEEP publishes when developing this schedule to use the GREET model or a successor model when it analyzes or models greenhouse gas emissions.

Existing law, unchanged by the bill, requires the commissioner to (1) develop this schedule with help from a nonprofit association that provides scientific, technical, analytical, and policy support to northeastern states' air quality and climate programs and (2) provide opportunity for public comment.

LOW-CARBON FUEL STANDARDS

Existing law requires DEEP to monitor low-carbon fuel standards in other states or jurisdictions, evaluate their potential to achieve net carbon reductions, and assess whether the analytical framework used to determine the carbon benefit measures the full lifecycle of greenhouse gas emissions, including emissions caused by changes in land use and other factors.

Under current law, the assessment must include the modeling tools developed by the California Air Resources Board and the U.S. Environmental Protection Agency. This analytical framework must (1) include all stages of fuel and feedstock production, delivery, and use of the finished fuel to the ultimate customer and (2) adjust the mass values for all greenhouse gas emissions relative to their global warming potential.

The bill eliminates this assessment requirement and instead requires DEEP to analyze the full lifecycle of greenhouse gas emissions for any low-carbon fuel standard it evaluates using the GREET model or a successor model.

COMPREHENSIVE ENERGY STRATEGY (CES)

Existing law requires DEEP to prepare a CES every four years and submit it to the Energy and Technology Committee. Among other

things, the CES must include any analysis and recommendations needed to guide the state's energy policy to meet greenhouse gas reduction requirements under state law (see BACKGROUND).

For any CES approved after October 1, 2024, the bill requires DEEP to use the GREET model or a successor model when analyzing the following topics on a lifecycle basis:

1. greenhouse gas reductions from using low-carbon fuel blends in home heating oil;
2. a thermal portfolio standard's ability to further greenhouse gas reductions; and
3. five-year, 10-year, and 20-year projections that compare greenhouse gas emission reductions achieved by biodiesel and other low-carbon fuel blends with those achieved by the retail heating oil industry, measured on a lifecycle basis.

BACKGROUND

GREET Model

The GREET model is a tool that assesses a range of life cycle energy, emissions, and environmental impact challenges that can be used to guide decisions, research and development, and regulations related to the transportation and energy sectors. GREET models are developed for specific use cases and can measure total energy consumption, fossil fuel energy use, greenhouse gas emissions, air pollutant emissions, and water consumption for a given energy or transportation technology.

Greenhouse Gas Reduction Targets

By law, the Global Warming Solutions Act requires the state to reduce greenhouse gas emissions from all sources to a level at least (1) 10% below 1990 emission levels by January 1, 2020; (2) 45% below 2001 emissions level by January 1, 2030; and (3) 80% below 2001 emission levels by January 1, 2050. The law additionally requires the state to reduce greenhouse gas emissions from electricity supplied to electric customers in the state to zero percent by January 1, 2040.

Related Bill

sHB 5004, favorably reported by the Environment Committee, among other things, sets new state greenhouse gas emissions reduction levels under the Global Warming Solutions Act and requires a consultant-prepared report on strategies to meet the new state reduction goals.

COMMITTEE ACTION

Energy and Technology Committee

Joint Favorable Change of Reference - ENV

Yea 18 Nay 2 (03/21/2024)

Environment Committee

Joint Favorable

Yea 28 Nay 6 (03/27/2024)