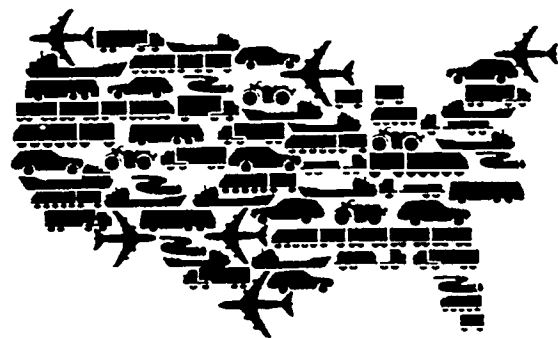


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GREET 1.0 — Transportation Fuel Cycles Model: Methodology and Use



**Center for Transportation Research
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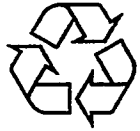
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June 1996

GREET — Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation

Work sponsored by the United States Department of Energy,
Assistant Secretary for Energy Efficiency and Renewable Energy,
Office of Transportation Technologies



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NOTICE

A previous report, prepared for the Office of Transportation Technologies, U.S. Department of Energy, and entitled *Criteria Pollutant, Greenhouse Gas, and Energy Model for Transportation Fuel Cycles*, documented an earlier version of the fuel-cycle emissions and energy-use model developed at Argonne National Laboratory. The original version of the model, called the **C**riteria **P**ollutant, **G**reenhouse **G**as, and **E**nergy **M**odel (CPGEM), relied on emission factors contained in the fourth edition (with various supplements) of the U.S. Environmental Protection Agency's (EPA's) AP-42 document. In 1995, EPA released the fifth edition of the AP-42 document. Argonne updated the model to reflect the emission factors contained in the fifth edition. The updated model was renamed the **G**reenhouse **G**ases, **R**egulated **E**missions, and **E**nergy **U**se in **T**ransportation (GREET) model. Additional features of the model include calculation of fossil fuel consumption, total energy consumption, and petroleum consumption; and calculation of both all-location and in-basin emissions for volatile organic compounds, carbon monoxide, nitrogen oxides, particulate matter measuring 10 microns (μm) or less, and sulfur oxides.

The updated model was described in a report issued in March 1996, entitled *Development and Use of the GREET Model to Estimate Fuel-Cycle Energy Use and Emissions of Various Transportation Technologies and Fuels*. The report was revised slightly in June 1996 and retitled *GREET 1.0—Transportation Fuel Cycles Model: Methodology and Use*.

CONTENTS

NOTATION	viii
ACKNOWLEDGMENTS	x
ABSTRACT	1
1 INTRODUCTION	1
2 REVIEW OF PREVIOUS FUEL-CYCLE STUDIES	3
2.1 Delucchi — 1991, 1993	3
2.2 National Renewable Energy Laboratory et al. — 1991, 1992	4
2.3 Bentley et al. — 1992	6
2.4 Brogan and Venkateswaran — 1992	7
2.5 Ecotraffic, AB — 1992	8
2.6 Wang and Santini — 1993	8
2.7 Darrow — 1994a, 1994b	9
2.8 Acurex — 1995	11
2.9 Summary	12
3 MODELING APPROACH	13
3.1 Fuel Cycles and Their Stages	13
3.2 Vehicle Types	13
3.3 Calculation of Energy Use during a Fuel-Cycle Stage	13
3.4 Calculation of Emissions for Each Fuel-Cycle Stage	15
4 CALCULATION OF FUEL-CYCLE EMISSIONS AND ENERGY USE	20
4.1 Petroleum-Based Fuel Cycles	20
4.1.1 Energy Efficiencies	20
4.1.2 VOC Evaporation and Fuel Spillage	20
4.1.3 Noncombustion Emissions at Refineries	21
4.2 Natural-Gas-Based Fuel Cycles	22
4.2.1 Energy Efficiencies	22
4.2.2 CH ₄ Leakage and Fuel Spillage	22
4.2.3 Noncombustion Emissions during Natural Gas Processing and Fuel Production	24

CONTENTS (Cont.)

4.3 Ethanol Production Cycles	24
4.3.1 Fuel and Fertilizer Use for Corn and Biomass Production	25
4.3.2 Energy Efficiencies for Other Stages	26
4.3.3 Noncombustion Emission Sources	26
4.3.4 Other Critical Assumptions	27
4.4 Coal to Electricity	28
4.4.1 Energy Efficiencies	28
4.4.2 Noncombustion Emissions	28
4.5 Uranium to Electricity	29
4.6 Landfill Gases to Methanol	29
4.6.1 Energy Efficiencies	29
4.6.2 Emission Credits of Methanol Production	29
4.7 Electricity Generation	30
4.7.1 Combustion Technologies	30
4.7.2 Power Plant Conversion Efficiencies	30
4.7.3 Electric Generation Mixes	32
4.8 Vehicle Operations	32
4.8.1 Vehicle Fuel Economy and Component Efficiencies	32
4.8.2 Emissions	35
5 MODEL LAYOUT	37
6 ENERGY USE AND EMISSIONS RESULTS	40
7 REFERENCES	57
APPENDIX: CHANGES IN ENERGY USE AND EMISSIONS BY ALTERNATIVE FUELS	61

TABLES

1 Fuel Cycles Included in the GREET Model	14
2 Energy Efficiencies of Petroleum-Based Fuel-Cycle Stages	21
3 Energy Efficiencies of Natural-Gas-Based Fuel-Cycle Stages	23

TABLES (Cont.)

4	Fuel and Fertilizer Usage for Production and Transportation of Corn and Biomass	25
5	Energy Efficiencies of Ethanol Production Stages	26
6	Energy Conversion Efficiencies of Electric Power Plants	31
7	Electric Generation Mix of Various U.S. Regions in 2005	33
8	Fuel Economy Improvements of 11 Vehicle Types	35
9	Emission Changes of Vehicle Operations for Various Vehicle Types	36
10	Fuel-Cycle Energy Use and Emissions of a 2000 Model Year Car in 2005	41

FIGURES

1	Electricity Supply Regions	34
2	Flow Diagram of the GREET Model	38
3	Calculation Logic of Upstream Emissions and Energy Use in the GREET Model	39
4	Change in Fuel-Cycle Total Energy Use	46
5	Change in Fuel-Cycle Fossil Fuel Use	47
6	Change in Fuel-Cycle Petroleum Use	48
7	Change in Fuel-Cycle VOC Emissions	49
8	Change in Fuel-Cycle CO Emissions	50
9	Change in Fuel-Cycle NO _x Emissions	51
10	Change in Fuel-Cycle PM ₁₀ Emissions	52
11	Change in Fuel-Cycle SO _x Emissions	53
12	Change in Fuel-Cycle Greenhouse Gas Emissions	54