

# ACRONYMS AND ABBREVIATIONS

ABT	averaging, banking, and trading	CHP	combined heat and power
AC	alternating current	CI	compression ignition
ACC	adaptive cruise control	CNG	compressed natural gas
AEO	Annual Energy Outlook, EIA	CNGV	compressed natural gas vehicle
AMT	automated manual transmission	CO	carbon monoxide
ANL	Argonne National Laboratory	CO <sub>2</sub>	carbon dioxide
AOPL	Association of Oil Pipe Lines	CO <sub>2</sub> e	carbon dioxide equivalent
APU	auxiliary power unit	CTL	coal-to-liquids
ATA	American Trucking Associations	CVT	continuously variable transmission
ATRI	American Transportation Research Institute	DC	direct current
BEV	battery electric vehicle	DEG	diesel equivalent gallon
BEV100	a BEV with up to 100 miles of total driving range	DI	direct injection
BTU	British thermal unit	DME	dimethyl ether
CAFE	Corporate Average Fuel Economy	DOE	U.S. Department of Energy
CAP	criteria air pollutant	DOT	U.S. Department of Transportation
Capex	capital expense	DPF	diesel particulate filter
CARB	California Air Resources Board	EGR	exhaust gas recirculation
CBTL	combined coal- and biomass-to-liquids	EIA	U.S. Energy Information Administration
CCS	carbon capture and sequestration	EISA	Energy Independence and Security Act
CDU	crude oil distillation unit	EPA	U.S. Environmental Protection Agency
CH <sub>4</sub>	methane	EPRI	Electric Power Research Institute
		EVSE	electric vehicle supply equipment

FAA	Federal Aviation Administration	HICE	hydrogen internal combustion engine
FAME	fatty acid methyl esters	HPDI	high-pressure direct injection
FCC	fluid catalytic cracking	HSS	hydrogen storage system
FCEV	fuel cell electric vehicle	HVP	high value product
FFV	flexible-fuel vehicle	ICE	internal combustion engine
FTF	Future Transportation Fuels (NPC study)	IEA	International Energy Agency
FTS	Fischer-Tropsch synthesis	ILUC	indirect land use change
g/bhp-hr	grams per brake horsepower-hour	IRR	internal rate of return
gCO <sub>2</sub> e	grams of carbon dioxide equivalent	ITS	intelligent transportation systems
GDI	gasoline direct injection	kg	kilogram
GDP	gross domestic product	kWh	kilowatt-hour
GGE	gallon gasoline equivalent	LCNG	liquefied compressed natural gas
GHG	greenhouse gas	LCV	longer combination vehicle
GREET	Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation model (from ANL)	LD	light-duty
GTL	gas-to-liquids	LHV	lower heating value
GVW	gross vehicle weight	LNG	liquefied natural gas
GVWR	gross vehicle weight rating	LPG	liquefied petroleum gas
GWP	global warming potential	MD	medium-duty
H <sub>2</sub>	hydrogen	MD/HD	medium-/heavy-duty
H2A	H2A Production Analysis tool (from NREL)	MDU	multiple dwelling unit
HCCI	homogeneous charge compression ignition	MMB/D	million barrels per day
HCL	hydrocarbon liquids	MMBTU	million British thermal units
HD	heavy-duty	MMT	million metric tons
HEV	hybrid electric vehicle	MPa	megapascals
HFCs	hydrofluorocarbons	mpg	miles per gallon
HHV	higher heating value (Chapter 15)	mph	miles per hour
HHV	hybrid hydraulic vehicle (Chapter 10)	MSRP	manufacturer's suggested retail price
		MSW	municipal solid waste
		MTG	methanol-to-gasoline
		MWh	megawatt-hour

N <sub>2</sub> O	nitrous oxide	PM	particulate matter
NAAQS	National Ambient Air Quality Standards	PMC	polymer matrix composites
NERC	North American Electric Reliability Corporation	PNNL	Pacific Northwest National Laboratory
NG	natural gas	psi	pounds per square inch
NGL	natural gas liquid	R&D	research and development
NGWBS	New-Generation Wide-Base Single	RCCI	reactivity controlled compression ignition
NHTSA	National Highway Traffic Safety Administration	RD&D	research, development, and demonstration
NO <sub>x</sub>	nitrogen oxides	RFF	Resources for the Future
NPC	National Petroleum Council	RFG	reformulated gasoline
NRC	National Research Council of the National Academies	RFS	Renewable Fuel Standard
NREL	National Renewable Energy Laboratory	RMI	Rocky Mountain Institute
OBD	on-board diagnostics	RNG	renewable natural gas
OECD	Organisation for Economic Co-operation and Development	RON	research octane number
OEM	original equipment manufacturer	RPE	retail price equivalent
OPEC	Organization of the Petroleum Exporting Countries	RPS	Renewable Portfolio Standard
ORNL	Oak Ridge National Laboratory	RSP	required selling price
PADDs	Petroleum Administration for Defense Districts	SAE	Society of Automotive Engineers
PCC	predictive cruise control	SCADA	Supervisory Control and Data Acquisition system
PCCI	premixed charge compression ignition	SCR	selective catalytic reduction
PEM	proton exchange membrane	SHF	separate hydrolysis and fermentation
PEV	plug-in electric vehicle	SI	spark ignition
PFI	port fuel injection	SMR	steam methane reforming
PHEV	plug-in hybrid electric vehicle	SO <sub>2</sub>	sulfur dioxide
PHEV10	PHEV with up to 10 miles of driving in all-electric mode	SOC	state-of-charge
PHEV40	PHEV with up to 40 miles of driving in all-electric mode	SSF	simultaneous saccharification and fermentation
		SUV	sport utility vehicle
		tcf	trillion cubic feet

TMS	Minerals, Metals, and Materials Society	VVA	variable valve actuation
UL	Underwriters Laboratories	Wh	watt-hour
USDA	U.S. Department of Agriculture	Wh/kg	watt-hours per kilogram
V	volt	WTW	well-to-wheels
VMT	vehicle miles traveled	XTL	gas-, coal-, or biomass-to-liquids
VOC	volatile organic compound		

