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# Transportation in a Climate-Constrained World

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## Abbreviations

ASK	Available seat kilometer
bbl	Barrel (1 bbl = 42 gal = 159 L)
BTL	Biomass-to-liquids
CAFE	Corporate Average Fuel Economy
CBO	Congressional Budget Office
CCSP	Climate Change Science Program
CTL	Coal-to-liquids
CH <sub>4</sub>	Methane
CNG	Compressed natural gas
CO <sub>2</sub>	Carbon dioxide
DOC	Direct operating costs
E	Energy
EJ	Exajoule (10 <sup>18</sup> joules)
E/PKT	Passenger travel energy intensity
EPPA	The MIT Emissions Prediction and Policy Analysis model
EPPA-Ref	EPPA reference run
ETS	Emissions Trading Scheme
FTP-75	Federal Test Procedure-75
g	Grams
gCO <sub>2</sub> -eq	Grams of CO <sub>2</sub> equivalent
gal	U.S. gallon (1 gal = 3.785 L)
GGE	Greenhouse gas emissions
GHG	Greenhouse gas
GE	Gasoline equivalent
GJ	Gigajoule (10 <sup>9</sup> joules)
GTL	Gas-to-liquids
GDP	Gross domestic product
GWP	Gross world product

ha	Hectare
hp	Horsepower (1 hp = 0.746 kW)
I	Investments
ICAO	International Civil Aviation Organization
IEA	International Energy Agency
IPCC	Intergovernmental Panel on Climate Change
J	Joule
kg	Kilograms
km	Kilometer (1 km = 0.622 miles)
kW	Kilowatts
kWh	Kilowatt hour
L	Liter (1 L = 0.264 gallon)
lbs	Pounds (1 lb = 0.454 kg)
LDV	Light-duty vehicle (automobiles and light trucks, i.e., mini-vans, vans, pickup trucks, and sport-utility vehicles)
LCB	Lifetime CO <sub>2</sub> burden
L/D	Lift-to-drag ratio
Li-ion	Lithium ion
LNG	Liquefied natural gas
MBTE	Methyl tertiary-butyl ether
MER	Market exchange rates
MJ	Megajoule (1 million joules)
mpg	Miles per gallon
NextGen	Next Generation Air Transportation System
NiMH	Nickel metal hydride
NO <sub>x</sub>	Nitrogen oxides
N <sub>2</sub> O	Nitrous oxide
NRC	National Research Council
OPEC	Organization of Petroleum Exporting Countries
PAX	Number of passengers
PJ	Petajoule (10 <sup>15</sup> joules)
pkm	Passenger kilometers
pmi	Passenger mile
PKT	Passenger kilometers traveled
PNGV	Partnership for a New Generation of Vehicles
ppmv	Parts per million by volume
PPP	Purchasing power parity
Q	Net energy content

SESAR	Single European Sky Air Traffic Management Research initiative
SFC	Specific fuel consumption
SRES	IPCC Special Report on Emission Scenarios
UN	United Nations
V	Speed
vkm	Vehicle kilometer
VKT	Vehicle kilometers traveled
VLJ	Very light jet (jet-engine-powered aircraft with a weight below 4.5 tons [10,000 lbs])
vmi	Vehicle mile
W	Weight
Wh	Watt hours
ZEV	Zero-Emission Vehicle