

# 10. References and Abbreviations

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## Abbreviations

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ABS	Acrylonitrile butadiene styrene	BIER	Beverage Industry Environmental Roundtable
AC	Air conditioner	BLM	Bureau of Land Management
ACC	American Chemistry Council	BoC	Bureau of Census
AEDT	FAA Aviation Environmental Design Tool	BOD	Biological oxygen demand
AEO	Annual Energy Outlook	BOD5	Biochemical oxygen demand over a 5-day period
AER	All-electric range	BOEM	Bureau of Ocean Energy Management
AF&PA	American Forest and Paper Association	BOEMRE	Bureau of Ocean Energy Management, Regulation and Enforcement
AFEAS	Alternative Fluorocarbon Environmental Acceptability Study	BOF	Basic oxygen furnace
AFOLU	Agriculture, Forestry, and Other Land Use	BRS	Biennial Reporting System
AFV	Alternative fuel vehicle	BSEE	Bureau of Safety and Environmental Enforcement
AGA	American Gas Association	BTS	Bureau of Transportation Statistics, U.S. Department of Transportation
AGR	Acid gas removal	Btu	British thermal unit
AHEF	Atmospheric and Health Effect Framework	C	Carbon
AHRI	Air-Conditioning, Heating, and Refrigeration Institute	C&D	Construction and demolition waste
AIM Act	American Innovation and Manufacturing Act	C&EN	Chemical and Engineering News
AISI	American Iron and Steel Institute	CAAA	Clean Air Act Amendments of 1990
ALU	Agriculture and Land Use	CAFOS	Concentrated Animal Feeding Operations
ANGA	American Natural Gas Alliance	CaO	Calcium oxide
ANL	Argonne National Laboratory	CAPP	Canadian Association of Petroleum Producers
APC	American Plastics Council	CARB	California Air Resources Board
API	American Petroleum Institute	CBI	Confidential business information
APTA	American Public Transportation Association	C-CAP	Coastal Change Analysis Program
AR4	IPCC Fourth Assessment Report	CDAT	Chemical Data Access Tool
AR5	IPCC Fifth Assessment Report	CEAP	USDA-NRCS Conservation Effects Assessment Program
AR6	IPCC Sixth Assessment Report	CEFM	Cattle Enteric Fermentation Model
ARI	Advanced Resources International	CEMS	Continuous emission monitoring system
ARMA	Autoregressive moving-average	CFC	Chlorofluorocarbon
ARMS	Agricultural Resource Management Surveys	CFR	Code of Federal Regulations
ASAE	American Society of Agricultural Engineers	CGA	Compressed Gas Association
ASLRRRA	American Short-line and Regional Railroad Association	CH <sub>4</sub>	Methane
ASR	Annual Statistical Report	CHAPA	California Health and Productivity Audit
ASTM	American Society for Testing and Materials	CHP	Combined heat and power
AZR	American Zinc Recycling	CI	Confidence interval
BCEF	Biomass conversion and expansion factors	CIGRE	International Council on Large Electric Systems
BEA	Bureau of Economic Analysis, U.S. Department of Commerce		

CKD	Cement kiln dust	FAA	Federal Aviation Administration
CLE	Crown Light Exposure	FAO	Food and Agricultural Organization
CMA	Chemical Manufacturer's Association	FAOSTAT	Food and Agricultural Organization database
CMM	Coal mine methane	FAS	Fuels Automated System
CMOP	Coalbed Methane Outreach Program	FCCC	Framework Convention on Climate Change
CMR	Chemical Market Reporter	FEB	Fiber Economics Bureau
CNG	Compressed natural gas	FEMA	Federal Emergency Management Agency
CO	Carbon monoxide	FERC	Federal Energy Regulatory Commission
CO <sub>2</sub>	Carbon dioxide	FGD	Flue gas desulfurization
COD	Chemical oxygen demand	FHWA	Federal Highway Administration
COGCC	Colorado Oil and Gas Conservation Commission	FIA	Forest Inventory and Analysis
CONUS	Continental United States	FIADB	Forest Inventory and Analysis Database
CRF	Common Reporting Format	FIPR	Florida Institute of Phosphate Research
CRM	Component ratio method	FOD	First order decay
CRP	Conservation Reserve Program	FOEN	Federal Office for the Environment
CSRA	Carbon Sequestration Rural Appraisals	FOKS	Fuel Oil and Kerosene Sales
CTIC	Conservation Technology Information Center	FQSV	First-quarter of silicon volume
CVD	Chemical vapor deposition	FSA	Farm Service Agency
CWNS	Clean Watershed Needs Survey	FTP	Federal Test Procedure
d.b.h	Diameter breast height	g	Gram
DE	Digestible energy	G&B	Gathering and boosting
DESC	Defense Energy Support Center-DoD's Defense Logistics Agency	GaAs	Gallium arsenide
DFAMS	Defense Fuels Automated Management System	GCV	Gross calorific value
DGGS	Division of Geological & Geophysical Surveys	GDP	Gross domestic product
DHS	Department of Homeland Security	GEI	Gulfwide Emissions Inventory
DLA	DoD's Defense Logistics Agency	GHG	Greenhouse gas
DM	Dry matter	GHGRP	EPA's Greenhouse Gas Reporting Program
DOC	Degradable organic carbon	GIS	Geographic Information Systems
DOC	U.S. Department of Commerce	GJ	Gigajoule
DoD	U.S. Department of Defense	GOADS	Gulf Offshore Activity Data System
DOE	U.S. Department of Energy	GOM	Gulf of Mexico
DOI	U.S. Department of the Interior	GPG	Good Practice Guidance
DOM	Dead organic matter	GRI	Gas Research Institute
DOT	U.S. Department of Transportation	GSAM	Gas Systems Analysis Model
DRE	Destruction or removal efficiencies	GTI	Gas Technology Institute
DRI	Direct Reduced Iron	GWP	Global warming potential
EAF	Electric arc furnace	ha	Hectare
EDB	Aircraft Engine Emissions Databank	HBFC	Hydrobromofluorocarbon
EDF	Environmental Defense Fund	HC	Hydrocarbon
EER	Energy economy ratio	HCFC	Hydrochlorofluorocarbon
EF	Emission factor	HCFO	Hydrochlorofluoroolefin
EFMA	European Fertilizer Manufacturers Association	HDDV	Heavy duty diesel vehicle
EJ	Exajoule	HDGV	Heavy duty gas vehicle
EGR	Exhaust gas recirculation	HDPE	High density polyethylene
EGU	Electric generating unit	HF	Hydraulically fractured
EIA	Energy Information Administration, U.S. Department of Energy	HFC	Hydrofluorocarbon
EIIP	Emissions Inventory Improvement Program	HFO	Hydrofluoroolefin
EOR	Enhanced oil recovery	HFE	Hydrofluoroether
EPA	U.S. Environmental Protection Agency	HHV	Higher Heating Value
EREF	Environment Research & Education Foundation	HMA	Hot Mix Asphalt
ERS	Economic Research Service	HMIWI	Hospital/medical/infectious waste incinerator
ETMS	Enhanced Traffic Management System	HTF	Heat Transfer Fluid
EV	Electric vehicle	HTS	Harmonized Tariff Schedule
EVI	Enhanced Vegetation Index	HVAE	High Voltage Anode Effects
		HWP	Harvested wood product
		IBF	International bunker fuels



IC	Integrated Circuit	MMBtu	Million British thermal units
ICAO	International Civil Aviation Organization	MMCF	Million cubic feet
ICBA	International Carbon Black Association	MMCFD	Million cubic feet per day
ICE	Internal combustion engine	MMS	Minerals Management Service
ICR	Information Collection Request	MMT	Million metric tons
IEA	International Energy Agency	MMTCE	Million metric tons carbon equivalent
IFO	Intermediate Fuel Oil	MMT CO <sub>2</sub>	Million metric tons carbon dioxide equivalent
IGES	Institute of Global Environmental Strategies	Eq.	
IISRP	International Institute of Synthetic Rubber Products	MODIS	Moderate Resolution Imaging Spectroradiometer
ILENR	Illinois Department of Energy and Natural Resources	MoU	Memorandum of Understanding
IMO	International Maritime Organization	MOVES	U.S. EPA's Motor Vehicle Emission Simulator model
IPAA	Independent Petroleum Association of America	MPG	Miles per gallon
IPCC	Intergovernmental Panel on Climate Change	MRLC	Multi-Resolution Land Characteristics Consortium
IPPU	Industrial Processes and Product Use	MRV	Monitoring, reporting, and verification
ITC	U.S. International Trade Commission	MSHA	Mine Safety and Health Administration
ITRS	International Technology Roadmap for Semiconductors	MSW	Municipal solid waste
JWR	Jim Walters Resources	MT	Metric ton
KCA	Key category analysis	MTBE	Methyl Tertiary Butyl Ether
kg	Kilogram	MTBS	Monitoring Trends in Burn Severity
kt	Kiloton	MVAC	Motor vehicle air conditioning
kWh	Kilowatt hour	MY	Model year
LDPE	Low density polyethylene	N <sub>2</sub> O	Nitrous oxide
LDT	Light-duty truck	NA	Not applicable; Not available
LDV	Light-duty vehicle	NACWA	National Association of Clean Water Agencies
LEV	Low emission vehicles	NAHMS	National Animal Health Monitoring System
LFG	Landfill gas	NAICS	North American Industry Classification System
LFGTE	Landfill gas-to-energy	NAPAP	National Acid Precipitation and Assessment Program
LHV	Lower Heating Value	NARR	North American Regional Reanalysis Product
LKD	Lime kiln dust	NAS	National Academies of Sciences, Engineering, and Medicine
LLDPE	Linear low density polyethylene	NASA	National Aeronautics and Space Administration
LMOP	EPA's Landfill Methane Outreach Program	NASF	National Association of State Foresters
LNG	Liquefied natural gas	NASS	USDA's National Agriculture Statistics Service
LPG	Liquefied petroleum gas(es)	NC	No change
LTO	Landing and take-off	NCASI	National Council of Air and Stream Improvement
LULUCF	Land Use, Land-Use Change, and Forestry	NCV	Net calorific value
LVAE	Low Voltage Anode Effects	ND	No data
M&R	Metering and regulating	NE	Not estimated
MARPOL	International Convention for the Prevention of Pollution from Ships	NEH	National Engineering Handbook
MC	Motorcycle	NEI	National Emissions Inventory
MCF	Methane conversion factor	NEMA	National Electrical Manufacturers Association
MCL	Maximum Contaminant Levels	NEMS	National Energy Modeling System
MCFD	Thousand cubic feet per day	NESHAP	National Emission Standards for Hazardous Air Pollutants
MDI	Metered dose inhalers	NEU	Non-Energy Use
MDP	Management and design practices	NEV	Neighborhood Electric Vehicle
MECS	EIA Manufacturer's Energy Consumption Survey	NF <sub>3</sub>	Nitrogen trifluoride
MEMS	Micro-electromechanical systems	NFI	National forest inventory
MER	Monthly Energy Review	NGL	Natural gas liquids
MGO	Marine gas oil	NID	National inventory of Dams
MgO	Magnesium oxide	NIR	National Inventory Report
MJ	Megajoule		
MLRA	Major Land Resource Area		
mm	Millimeter		

NLA	National Lime Association	PLS	Pregnant liquor solution
NLCD	National Land Cover Dataset	POTW	Publicly Owned Treatment Works
NMOC	Non-methane organic compounds	ppbv	Parts per billion (10 <sup>9</sup> ) by volume
NMVOG	Non-methane volatile organic compound	ppm	Parts per million
NMOG	Non-methane organic gas	ppmv	Parts per million (10 <sup>6</sup> ) by volume
NO	Not occurring	pptv	Parts per trillion (10 <sup>12</sup> ) by volume
NO <sub>2</sub>	Nitrogen dioxide	PRCI	Pipeline Research Council International
NO <sub>x</sub>	Nitrogen oxides	PRP	Pasture/Range/Paddock
NOAA	National Oceanic and Atmospheric Administration	PS	Polystyrene
NOF	Not on feed	PSU	Primary Sample Unit
NPDES	National Pollutant Discharge Elimination System	PU	Polyurethane
NPP	Net primary productivity	PVC	Polyvinyl chloride
NPPA	National Petroleum and Refiners Association	PV	Photovoltaic
NRBP	Northeast Regional Biomass Program	QA/QC	Quality Assurance and Quality Control
NRC	National Research Council	QBtu	Quadrillion Btu
NRCS	Natural Resources Conservation Service	R&D	Research and Development
NREL	National Renewable Energy Laboratory	RECs	Reduced Emissions Completions
NRI	National Resources Inventory	RCRA	Resource Conservation and Recovery Act
NSCEP	National Service Center for Environmental Publications	RFA	Renewable Fuels Association
NSCR	Non-selective catalytic reduction	RFS	Renewable Fuel Standard
NSPS	New source performance standards	RMA	Rubber Manufacturers' Association
NWS	National Weather Service	RPA	Resources Planning Act
OAG	Official Airline Guide	RTO	Regression-through-the-origin
OAP	EPA Office of Atmospheric Programs	SAE	Society of Automotive Engineers
OAQPS	EPA Office of Air Quality Planning and Standards	SAGE	System for assessing Aviation's Global Emissions
ODP	Ozone depleting potential	SAIC	Science Applications International Corporation
ODS	Ozone depleting substances	SAN	Styrene Acrylonitrile
OECD	Organization of Economic Co-operation and Development	SAR	IPCC Second Assessment Report
OEM	Original equipment manufacturers	SCR	Selective catalytic reduction
OGJ	Oil & Gas Journal	SCSE	South central and southeastern coastal
OGOR	Oil and Gas Operations Reports	SDR	Steel dust recycling
OH	Hydroxyl radical	SEC	Securities and Exchange Commission
OMS	EPA Office of Mobile Sources	SEMI	Semiconductor Equipment and Materials Industry
ORNL	Oak Ridge National Laboratory	SF <sub>6</sub>	Sulfur hexafluoride
OSHA	Occupational Safety and Health Administration	SIA	Semiconductor Industry Association
OTA	Office of Technology Assessment	SiC	Silicon carbide
OTAQ	EPA Office of Transportation and Air Quality	SICAS	Semiconductor International Capacity Statistics
OVS	Offset verification statement	SNAP	Significant New Alternative Policy Program
PADUS	Protected Areas Database of the United States	SNG	Synthetic natural gas
PAH	Polycyclic aromatic hydrocarbons	SO <sub>2</sub>	Sulfur dioxide
PCA	Portland Cement Association	SOC	Soil Organic Carbon
PCC	Precipitate calcium carbonate	SOG	State of Garbage survey
PDF	Probability Density Function	SOHIO	Standard Oil Company of Ohio
PECVD	Plasma enhanced chemical vapor deposition	SSURGO	Soil Survey Geographic Database
PET	Polyethylene terephthalate	STMC	Scrap Tire Management Council
PET	Potential evapotranspiration	SULEV	Super Ultra Low Emissions Vehicle
PEVM	PFC Emissions Vintage Model	SWANA	Solid Waste Association of North America
PFC	Perfluorocarbon	SWDS	Solid waste disposal sites
PFPE	Perfluoropolyether	SWICS	Solid Waste Industry for Climate Solutions
PHEV	Plug-in hybrid vehicles	TA	Treated anaerobically (wastewater)
PHMSA	Pipeline and Hazardous Materials Safety Administration	TAM	Typical animal mass
PI	Productivity index	TAME	Tertiary amyl methyl ether
		TAR	IPCC Third Assessment Report
		TBtu	Trillion Btu
		TDN	Total digestible nutrients

TEDB	Transportation Energy Data Book	USAF	United States Air Force
TFI	The Fertilizer Institute	USDA	United States Department of Agriculture
TIGER	Topologically Integrated Geographic Encoding and Referencing survey	USFS	United States Forest Service
TJ	Terajoule	USGS	United States Geological Survey
TLEV	Traditional low emissions vehicle	USITC	U.S. International Trade Commission
TMLA	Total Manufactured Layer Area	VAIP	EPA's Voluntary Aluminum Industrial Partnership
TOW	Total organics in wastewater	VAM	Ventilation air methane
TPO	Timber Product Output	VKT	Vehicle kilometers traveled
TRI	Toxic Release Inventory	VMT	Vehicle miles traveled
TSDF	Hazardous waste treatment, storage, and disposal facility	VOCs	Volatile organic compounds
TTB	Tax and Trade Bureau	VS	Volatile solids
TVA	Tennessee Valley Authority	WBJ	Waste Business Journal
UAN	Urea ammonium nitrate	WEF	Water Environment Federation
UDI	Utility Data Institute	WERF	Water Environment Research Federation
UFORE	U.S. Forest Service's Urban Forest Effects model	WFF	World Fab Forecast (previously WFW, World Fab Watch)
UG	Underground (coal mining)	WGC	World Gas Conference
U.S.	United States	WIP	Waste-in-place
U.S. ITC	United States International Trade Commission	WMO	World Meteorological Organization
UEP	United Egg Producers	WMS	Waste management systems
ULEV	Ultra low emission vehicle	WRRF	Water resource recovery facilities
UNEP	United Nations Environmental Programme	WTE	Waste-to-energy
UNFCCC	United Nations Framework Convention on Climate Change	WW	Wastewater
USAA	U.S. Aluminum Association	WWTP	Wastewater treatment plant
		ZEVs	Zero emissions vehicles