

# Appendix 1

## Acronyms

<b>AAAS</b>	American Association for the Advancement of Science	<b>BEA</b>	U.S. Bureau of Economic Analysis
<b>AC</b>	alternating current	<b>BHC</b>	Bradford Hill Criteria
<b>ACC</b>	American Chemistry Council <i>also</i> anthropogenic climate change	<b>BLM</b>	U.S. Bureau of Land Management
<b>ACE</b>	accumulated cyclone energy	<b>BOD</b>	biological oxygen demand
<b>ACRIM</b>	Active Cavity Radiometer Irradiance Monitor satellite	<b>BP</b>	before present
<b>ACS</b>	American Cancer Society	<b>BR</b>	brassinosteroid
<b>AD</b>	<i>anno Domini</i>	<b>BTU</b>	British thermal unit
<b>AEMO</b>	Australian Energy Market Operator	<b>C</b>	carbon; also Celsius
<b>AGW</b>	anthropogenic global warming	<b>C<sub>3</sub></b>	C <sub>3</sub> carbon fixation pathway for photosynthesis
<b>AMI</b>	acute myocardial infarction	<b>C<sub>4</sub></b>	C <sub>4</sub> carbon fixation pathway for photosynthesis
<b>AMO</b>	Atlantic Multidecadal Oscillation	<b>C4MIP</b>	Coupled Carbon Cycle Climate Model Intercomparison Project
<b>AMOC</b>	Atlantic Meridional Overturning Circulation	<b>Ca</b>	CO <sub>2</sub> concentration in the air
<b>AMS</b>	American Meteorological Society	<b>CAFE</b>	corporate average fuel economy
<b>ANN</b>	artificial neural network	<b>CAM</b>	crassulacean acid metabolism
<b>ANPP</b>	aboveground net primary production	<b>CARB</b>	California Air Resources Board
<b>AO/NAO</b>	Arctic Oscillation/North Atlantic Oscillation	<b>CBA</b>	cost-benefit analysis
<b>APS</b>	atmospheric pollen season	<b>CBD</b>	cerebrovascular disease
<b>AR5</b>	Fifth Assessment Report	<b>CC</b>	combined cycle (natural gas)
<b>aSAH</b>	aneurysmal subarachnoid hemorrhage	<b>CCS</b>	carbon capture and sequestration (storage)
<b>BA</b>	burned area	<b>CDC</b>	U.S. Centers for Disease Control and Prevention
<b>BAI</b>	basal area index	<b>CE</b>	Common Era
<b>BC</b>	before Christ <i>also</i> black carbon	<b>CER</b>	cumulative excess [mortality] risk
<b>BCA</b>	benefit-cost analysis	<b>CERN</b>	European Institute for Nuclear Research
<b>BCE</b>	before Common Era	<b>CF</b>	capacity factor

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## Climate Change Reconsidered II: Fossil Fuels

<b>CFC</b>	chlorofluorocarbon	<b>EKC</b>	Environmental Kuznets Curve
<b>CGCM</b>	coupled general circulation model	<b>EM</b>	electromagnetic
<b>CGE</b>	computable general equilibrium	<b>ENSO</b>	El Niño-Southern Oscillation
<b>CH<sub>4</sub></b>	methane	<b>EPA</b>	U.S. Environmental Protection Agency
<b>CHD</b>	coronary heart disease	<b>EROI</b>	energy return on investment
<b>CLOUD</b>	Cosmics Leaving Outdoor Droplets experiment	<b>ESA</b>	Endangered Species Act
<b>CME</b>	coronal mass ejection	<b>ETS</b>	extratropical storm
<b>CMIP</b>	Coupled Model Intercomparison Project	<b>EU</b>	European Union
<b>CNRS</b>	National Center for Scientific Research (France)	<b>EVI</b>	Enhanced Vegetation Index
<b>CO</b>	carbon monoxide	<b>F</b>	Fahrenheit
<b>CO<sub>2</sub></b>	carbon dioxide	<b>FACE</b>	free-air CO <sub>2</sub> enrichment
<b>CO<sub>2e</sub></b>	carbon dioxide equivalent	<b>FAOCE</b>	free-air ozone and CO <sub>2</sub> enrichment
<b>CONUS</b>	continental United States	<b>FAO</b>	Food and Agriculture Organization of the United Nations
<b>COP</b>	Conference of the Parties	<b>Fe</b>	iron
<b>COPD</b>	chronic obstructive pulmonary disease	<b>FERC</b>	U.S. Federal Energy Regulatory Commission
<b>C<sub>org</sub></b>	organic carbon	<b>FJC</b>	Federal Judicial Center
<b>CPP</b>	Clean Power Plan	<b>FME</b>	free-market environmentalism
<b>CRF</b>	cosmic ray flux	<b>FOIA</b>	Freedom of Information Act
<b>CRU</b>	Climatic Research Unit at the University of East Anglia	<b>FUND</b>	Climate Framework for Uncertainty, Negotiation, and Distribution
<b>CT</b>	combustion turbine (natural gas)	<b>FWS</b>	U.S. Fish and Wildlife Service
<b>CVD</b>	cardiovascular disease	<b>FY</b>	fiscal year
<b>CWP</b>	crop water productivity	<b>GAM</b>	generalized additive model
<b>DBD</b>	dry bulk density	<b>GAO</b>	U.S. Government Accountability Office
<b>DC</b>	direct current	<b>GCM</b>	General Circulation Models
<b>DIC</b>	dissolved organic carbon	<b>GCR</b>	galactic cosmic ray
<b>DM</b>	dry matter	<b>GCSC</b>	General Crisis of the Seventeenth Century
<b>DMS</b>	dimethyl sulfide	<b>GDP</b>	Gross Domestic Product
<b>DNA</b>	deoxyribonucleic acid	<b>GDP<sub>pc</sub></b>	Gross Domestic Product per capita
<b>DOC</b>	dissolved organic carbon	<b>GHG</b>	greenhouse gas
<b>DoD</b>	U.S. Department of Defense	<b>GIGO</b>	garbage in, garbage out
<b>DICE</b>	Dynamic Integrated Climate-Economy	<b>GIMMS</b>	Global Inventory Modeling and Mapping Studies
<b>DOI</b>	U.S. Department of Interior	<b>GIS</b>	geographic information system
<b>DTR</b>	diurnal temperature range	<b>GISP</b>	Greenland Ice Sheet Project
<b>ECE</b>	extreme climate event	<b>GISS</b>	Goddard Institute for Space Studies
<b>ECS</b>	equilibrium climate sensitivity	<b>GJ</b>	gigajoule
<b>EDF</b>	Environmental Defense Fund	<b>GMCO<sub>2</sub></b>	global mean carbon dioxide
<b>EIA</b>	U.S. Energy Information Administration	<b>GMST</b>	global mean surface temperature
<b>EJ</b>	exajoule		

## Appendix 1: Acronyms

<b>gNDVI</b>	Normalized Difference Vegetation Index over the Growing Season	<b>IPCC 2007-II</b>	Intergovernmental Panel on Climate Change – Group II Contribution
<b>GNP</b>	Gross National Product	<b>IPCC 2007-III</b>	Intergovernmental Panel on Climate Change – Group III Contribution
<b>GPP</b>	gross primary production	<b>IPCC-FAR</b>	Intergovernmental Panel on Climate Change – First Assessment Report
<b>gr</b>	gram(s)	<b>IPCC-SAR</b>	Intergovernmental Panel on Climate Change – Second Assessment Report
<b>GRACE</b>	Gravity Recovery and Climate Experiment	<b>IPCC-TAR</b>	Intergovernmental Panel on Climate Change – Third Assessment Report
<b>GREB</b>	Globally Resolved Energy Balance model	<b>IPCC-AR4</b>	Intergovernmental Panel on Climate Change – Fourth Assessment Report
<b>GrIS</b>	Greenland Ice Sheet	<b>IPCC-AR5</b>	Intergovernmental Panel on Climate Change – Fifth Assessment Report
<b>GSM</b>	grand solar minimum	<b>IR</b>	infrared
<b>GSP</b>	gross state product	<b>IRR</b>	incidence rate ratio
<b>GtC</b>	gigatons of carbon	<b>IS</b>	ischemic stroke
<b>GW</b>	gigawatt	<b>ISEE</b>	International Society for Ecological Economics
<b>H<sub>2</sub>O<sub>2</sub></b>	hydrogen peroxide	<b>ITS</b>	Investment Tax Credit
<b>H<sub>2</sub>SO<sub>4</sub></b>	sulfuric acid	<b>IWG</b>	Interagency Working Group on the Social Cost of Carbon
<b>H<sub>2</sub>S</b>	hydrogen sulfide	<b>IWUE (iWUE)</b>	intrinsic water use efficiency
<b>HadCRUT</b>	Hadley Center/Climatic Research Unit dataset of monthly instrumental temperature records	<b>JAMA</b>	Journal of the American Medical Association
<b>HAMOCC</b>	Hamburg Ocean Carbon Cycle model	<b>K</b>	Kelvin
<b>HCFC</b>	hydrochlorofluorocarbon	<b>ka</b>	thousand years
<b>HEI</b>	Health Effects Institute	<b>kcal</b>	kilocalorie
<b>HEM</b>	Heritage Energy Model	<b>kPa</b>	kilopascal, a measure of pressure
<b>HFC</b>	hydrofluorocarbon	<b>kWh</b>	kilowatt hour
<b>HNO<sub>3</sub></b>	nitric acid	<b>kWhe</b>	kilowatt hour of electricity
<b>HU</b>	hydrologic unit	<b>kWht</b>	thermal kilowatt hour
<b>HURdat</b>	hurricane database	<b>J</b>	joule
<b>IAC</b>	InterAcademy Council	<b>JI</b>	joint implementation
<b>IAM</b>	integrated assessment model	<b>LAI</b>	leaf area index
<b>IEA</b>	International Energy Agency	<b>LCOE</b>	levelized cost of electricity
<b>IER</b>	Institute for Energy Research	<b>LED</b>	light-emitting diode
<b>IHD</b>	ischaemic heart disease	<b>LGM</b>	Last Glacial Maximum
<b>INM-CM4</b>	Institute for Numerical Mathematics (Russian Academy of Sciences) climate model	<b>LIA</b>	Little Ice Age
<b>IPAT</b>	equation where I is environmental impact, P is human population, A is per-capita affluence, and T is technological innovation	<b>LIG</b>	last interglacial
<b>IPCC</b>	United Nations' Intergovernmental Panel on Climate Change	<b>LIM</b>	linear inverse model
<b>IPCC 2007-I</b>	Intergovernmental Panel on Climate Change – Group 1 Contribution	<b>LNT</b>	linear-no threshold
		<b>LOAEL</b>	lowest observed adverse effect level
		<b>LOI</b>	loss on ignition

## Climate Change Reconsidered II: Fossil Fuels

<b>LST</b>	land surface temperature	<b>NMMAPS</b>	National Morbidity, Mortality and Air Pollution Study
<b>LWIR</b>	longwave infrared	<b>NOAA</b>	U.S. National Oceanic and Atmospheric Administration
<b>m</b>	meter	<b>NOAEL</b>	no observed adverse effect level
<b>Ma</b>	million years	<b>NO</b>	nitric oxide
<b>Ma BP</b>	million years before present	<b>NO<sub>x</sub></b>	nitrogen oxides
<b>MAAT</b>	mean annual air temperature	<b>NPP</b>	net primary productivity (production)
<b>MBtu</b>	million British thermal units	<b>NRDC</b>	Natural Resources Defense Council
<b>MCA</b>	Medieval Climate Anomaly	<b>NSPS</b>	New Source Performance Standards
<b>MeHg</b>	methylmercury	<b>NUE</b>	nitrogen use efficiency
<b>MMT</b>	minimum mortality temperature; also million metric tons	<b>NWS</b>	U.S. National Weather Service
<b>MMTS</b>	maximum-minimum temperature sensor	<b>O<sub>3</sub></b>	ozone
<b>MODIS</b>	MODerate resolution Imaging Spectroradiometer	<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>MS</b>	magnetic susceptibility	<b>OHCA</b>	out-of-hospital cardiac arrest
<b>MSL</b>	mean sea level	<b>OIRA</b>	U.S. Office of Information and Regulatory Affairs
<b>MTCE</b>	million tons of carbon equivalent	<b>OMB</b>	U.S. Office of Management and Budget
<b>MW</b>	megawatt	<b>OTC</b>	open-top chamber
<b>MWP</b>	Medieval Warm Period	<b>PAGE</b>	Policy Analysis of the Greenhouse Effect
<b>N</b>	nitrogen	<b>PAR</b>	populations at risk
<b>N<sub>2</sub>O</b>	nitrous oxide	<b>Pb</b>	lead
<b>NAAQS</b>	National Ambient Air Quality Standards	<b>PCT</b>	potential compensation test
<b>NaCl</b>	sodium chloride	<b>PDI</b>	power dissipation index
<b>NAE</b>	National Academy of Engineering	<b>PDO</b>	Pacific Decadal Oscillation
<b>NAO</b>	North Atlantic Oscillation	<b>PET</b>	physiologically equivalent temperature
<b>NAPAP</b>	National Acid Precipitation Assessment Program	<b>PETM</b>	Palaeocene-Eocene Thermal Maximum
<b>NARR</b>	North American Regional Reanalysis	<b>Pg</b>	petagram (one billion metric tonnes)
<b>NAS</b>	National Academy of Sciences (USA)	<b>PGD</b>	Plant Growth Database
<b>NASA</b>	National Aeronautics and Space Administration (USA)	<b>PGR</b>	post-glacial rebound
<b>NCDC</b>	National Climatic Data Center	<b>pH</b>	a measure of acidity or basicity
<b>NDVI</b>	Normalized Difference Vegetation Index	<b>PM</b>	particulate matter
<b>NEMS</b>	National Energy Modeling System	<b>PM<sub>2.5</sub></b>	particles less than or equal to 2.5 μm (micrometer)
<b>NETL</b>	National Energy Technology Laboratory	<b>PM<sub>10</sub></b>	particles less than or equal to 10 μm in diameter (about one-seventh the diameter of a human hair)
<b>NFI</b>	National Forest Inventory	<b>PPA</b>	power purchase agreement
<b>NH<sub>4</sub></b>	ammonium	<b>ppb</b>	parts per billion
<b>NH</b>	Northern Hemisphere	<b>ppm</b>	parts per million
<b>NHL</b>	northern high latitudes	<b>ppmv</b>	parts per million by volume
<b>NIPCC</b>	Nongovernmental International Panel on Climate Change		

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<b>PPP</b>	purchasing power parity	<b>TLT</b>	temperature lower troposphere
<b>PRIO</b>	Peace Research Institute of Oslo	<b>Tmax</b>	maximum temperature
<b>PSMSL</b>	Permanent Service for Mean Sea Level	<b>Tmin</b>	minimum temperature
<b>PTC</b>	Production Tax Credit	<b>TOA</b>	top of atmosphere
<b>PV</b>	photovoltaic	<b>Topt</b>	optimum temperature
<b>PVC</b>	polyvinyl chloride	<b>TRCS</b>	The Right Climate Stuff
<b>rBC</b>	refractory black carbon	<b>TRW</b>	tree-ring width
<b>RCP</b>	representative concentration pathway	<b>TSI</b>	total solar irradiance
<b>RD</b>	respiratory disease	<b>TW</b>	terawatt
<b>RF</b>	radiative forcing	<b>TWh</b>	terawatt hour
<b>RIA</b>	regulatory impact analysis	<b>UAH</b>	University of Alabama Huntsville
<b>RPM</b>	revolutions per minute	<b>UCD</b>	unusually cold day
<b>RR</b>	relative risk	<b>UN</b>	United Nations
<b>RSV</b>	respiratory syncytial virus	<b>UNCED</b>	United Nations Conference on Environment and Development
<b>RTI</b>	respiratory tract infection	<b>UNEP</b>	United Nations Environment Program
<b>RWP</b>	Roman Warm Period	<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>SARS</b>	sudden acute respiratory disease	<b>USDM</b>	U.S. Drought Monitor
<b>SCC</b>	social cost of carbon	<b>USDOE</b>	U.S. Department of Energy
<b>SCD</b>	sudden cardiac death	<b>USHCN</b>	U.S. Historical Climatology Network
<b>SEPP</b>	Science and Environmental Policy Project	<b>UV</b>	ultraviolet
<b>SLR</b>	sea-level rise	<b>VOC</b>	volatile organic compound
<b>SNEP</b>	Sierra Nevada Ecosystem Project	<b>VWC</b>	virtual water content
<b>SO<sub>2</sub></b>	sulfur dioxide	<b>W</b>	watt
<b>SO<sub>3</sub></b>	sulfur trioxide	<b>WCED</b>	World Commission on Economic Development
<b>SOC</b>	soil organic carbon	<b>WGI</b>	Working Group I of IPC
<b>SOM</b>	soil organic matter	<b>WGII</b>	Working Group II of IPCC
<b>SPM</b>	Summary for Policymakers	<b>WGIII</b>	Working Group III of IPCC
<b>SRES</b>	Special Report on Emission Scenarios	<b>WHO</b>	World Health Organization
<b>SST</b>	sea surface temperature	<b>WMO</b>	World Meteorological Organization
<b>STPR</b>	social time preference rate	<b>WNP</b>	Western North Pacific
<b>TAR</b>	Third Assessment Report	<b>WTA</b>	willingness to accept
<b>TBE</b>	tick-borne encephalitis	<b>WTP</b>	willingness to pay
<b>TBEV</b>	tick-borne encephalitis virus	<b>WUE</b>	water use efficiency
<b>TC</b>	tropical cyclone	<b>YLL</b>	years of life lost
<b>Tcf</b>	trillion cubic feet	<b>Zn</b>	zinc
<b>tCO<sub>2e</sub></b>	ton of CO <sub>2</sub> equivalent		
<b>TCPI</b>	Tropical Cycle Potential Impact index		
<b>TCS</b>	transient climate sensitivity		
<b>TFR</b>	total fertility rate		
<b>Tg</b>	teragram		