

DRAFT

CLIMATE CHANGE AND SUSTAINABILITY REFERENCE GUIDE

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This reference guide has been compiled with climate change and sustainability acronyms, terminology, internet resources, and example regulations and voluntary initiatives. This study guide is intended to serve as a reference tool as well as a resource toward further understanding the “language” which surround the ideas of climate change and sustainability. Having a common language to speak from is the first step in addressing global climate change issues.

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Greenhouse Gas Summary

Greenhouse gases (GHG) are typically expressed in terms of carbon dioxide equivalents (CO₂e) based on their global warming potential (GWP). The six internationally recognized greenhouse gases are:

Carbon dioxide (CO₂); GWP = 1

Sources: Fossil fuel combustion (petroleum, coal and natural gas) for electricity, transportation, industrial and residential commercial use, iron and steel production, cement manufacturing and biomass burning

Methane (CH₄); GWP = 25 (21 in SAR)

1 g CH₄ = 25 g CO₂e

Sources: Landfills (decomposition of organic wastes), coal mines, oil and gas operations and agriculture (manure management)

Nitrous oxide (N₂O); GWP = 298 (310 in SAR)

1 g N₂O = 298 g CO₂e

Sources: Agricultural soil management (nitrogen fertilizers), fossil fuel combustion, solid waste production and industrial production activities

Hydrofluorocarbons (HFCs) (19); GWP = 124 - 14,800

Example: CHF₃

Sources: Replacement for ozone depleting substances, HCFC-22 production (releases HFC-23) and semiconductor manufacturing

Perfluorocarbons (PFCs) (7); GWP = 7,390 - 17,700

Example: CF₄

Sources: Aluminum smelting, semiconductor manufacturing, refrigerants, replacement for chlorofluorocarbons, and tracers

Sulfur hexafluoride (SF₆); GWP = 22,800

1 g SF₆ = 22,800 g CO₂e

Sources: Electrical power transmission and distribution, magnesium processing, and semiconductor manufacturing

Reference: U.S. Greenhouse Gas Inventory, www.epa.gov/globalwarming/publications/emissions and Fourth Assessment Report, www.ipcc.ch (SAR = Second Assessment Report)

Acronyms

Acronym	Definition
AAO	Antarctic Oscillation
AAU	Assigned Amount Unit
AB	Accrediting Body: Assembly Bill
AB32	Assembly Bill 32 - California's Global Warming Solutions Act of 2006
ABM	Agent-based Models
AC	Air Conditioning
ACIA	Arctic Climate Impact Assessment
AE	Alternative Energy
AEJ	African Easterly Jet
AEZ	Agro-ecological Zone
AFF	Ancient Forest Friendly
Ag	Agriculture
AGCM	Atmospheric General Circulation Model
AGO	Australian Greenhouse Office
AIACC	Assessments of Impacts and Adaptations to Climate Change in Multiple Regions and Sectors
AIDS	Acquired Immune Deficiency Syndrome
ANSI	American National Standards Institute
AO	Arctic Oscillation
AOGCM	Atmosphere-Ocean General Circulation Model
APCU	Air Pollution Control Unit
APET	Amorphous Polyethylene Terephthalate
APF	Adaptation Policy Framework
AR4	IPCC Fourth Assessment Report (2007)
ARB	Air Resources Board of California (see also CARB)
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers
ASTM	American Society of Testing Materials
ATCM	Air Toxic Control Measure

Acronyms

Acronym	Definition
AVHRR	Advanced Very High Resolution Radiometer
BACT	Best Available Control Technology
BAR	Bureau of Automotive Repair (California)
BAU	Business as Usual
BC	British Columbia
BEAR	Berkeley Energy and Resources
BIPV	Building Integrated Photovoltaic
BMP	Best Management Practice
BSATS	Brazilian Semi-arid Tropics
Btu	British thermal unit(s)
C2C	Cradle-to-cradle
CAA	Canadian Arctic Archipelago
CAFO	Confined Animal Feeding Operation
CAISO	California Independent System Operator
CalEPA	California Environmental Protection Agency
CalTrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CAR	Climate Action Registry (under CCAR)
CARB	California Air Resources Board (see also ARB)
CARROT	Climate Action Registry Reporting Online Tool
CAT	Climate Action Team (California)
CBA	Cost-benefit Analysis
CBD	Convention on Biological Diversity
CBSC	California Building Standards Commission
CC	Climate Change
CCA	Community Choice Aggregators
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources (United Nations) Convention to Combat Desertification
CCAR	California Climate Action Registry

Acronyms

Acronym	Definition
CCD	Convention to Combat Desertification (United Nations)
CCIAV	Climate Change Impacts, Adaptations and Vulnerability
CCN	Cloud Condensation Nuclei
CCRC	Climate Change Research Center
CCS	Carbon dioxide Capture and Sequestration
CCX	Chicago Climate Exchange
CCFE	Chicago Climate Futures Exchange
CDE	California Department of Education
CDF	Conditional Damage Function
CDFA	California Department of Food and Agriculture
CDM	Clean Development Mechanism
CDP	Carbon Disclosure Project
CEE	Central and Eastern Europe
C-E	Cost Effectiveness
CEC	California Energy Commission
CEM(S)	Continuous Emissions Monitoring (Systems)
CEQA	California Environmental Quality Act
CER	Certified Emissions Reduction
CERES	Coalition for Environmentally Responsible Economies
C2F6	Hexafluoroethane
CFC	Circulating Fluidized-bed Boiler
CFC	Chlorofluorocarbon(s)
CFIs	Carbon Financial Instruments
CFL	Compact Fluorescent Light (bulb)
CFP	Common Fisheries Policy

Acronyms

Acronym	Definition
CFR	Code of Federal Regulations
CGE	Computable General Equilibrium (model)
CH ₄	Methane (a GWP gas)
CHP	Combined Heat and Power
CHPS	Collaborative for High Performance Schools
CIESIN	Center for International Earth Science Information Network
CIF	Carbon Intensity Factor
CITES	Convention on International Trade in Endangered Species of Wild Flora and Fauna
CIWMB	California Integrated Waste Management Board
CMAQ	Community Multiscale Air Quality (model)
CMS	Compliance Management System
CMUA	California Municipal Utilities Association
CNG	Compressed Natural Gas
CO	Carbon monoxide
CO ₂	Carbon dioxide (a GWP gas)
CO _{2e}	Carbon dioxide Equivalent(s)
COI	Conflict of Interest
COP	Coefficient of Performance
CP	Cleaner Production
CPPS	Permanent Commission of the South Pacific
CPUC	California Public Utilities Commission
CRC	Carbon Regenerated Catalyst
CREB	Carbon Renewable Energy Bonds
CRID	Center for Regional Disaster Information (Central America)
CRIS	Climate Registry Information System
CRC	Carbon Regenerated Catalyst
CREB	Carbon Renewable Energy Bonds
CRT	Carbon Reduction Tons

Acronyms

Acronym	Definition
CSA	Canadian Standards Association
CSA	Consumer Service Agent
CSAC	California State Association of Counties
CSI	California Solar Initiative
CSIRO	Commonwealth Scientific & Industrial Research Organization
CSP	Concentrating Solar Power
CSR	Corporate Social Responsibility
CSU	California State University
CSu	Corporate Sustainability
CVD	Chemical Vapor Deposition
DAC	Development Assistance Committee
DAI	Dangerous Anthropogenic Interference
DALY	Disability Adjusted Life Year
DCA	Department of Consumer Affairs (California)
DDC	Data Distribution Centre (of the IPCC)
DEFRA	Department for Environment, Food and Rural Affairs (of the UK Government)
DFG	Department of Fish and Game (California)
DG	Distributed Generation
DGS	Department of General Services
DGVM	Dynamic Global Vegetation Model
DIC	Dissolved Inorganic Carbon
DIY	Do-it-yourself
DJF	December, January, February
DJSI	Dow Jones Sustainability Index(es)
DMS	Dimethyl sulfide
DMV	Department of Motor Vehicles (California)
DOC	Department of Conservation (California)
DOE	Department of Energy (California)

Acronyms

Acronym	Definition
DOE	Designated Operational Entity (UNFCCC)
DPH	Department of Public Health (California)
DPSIR	Drivers-pressures-state-impacts-response
DWC	Dialogue on Water and Climate
DWR	Department of Water Resources (California)
DX	Direct Expansion
3E's	Environment, Economics, Equity
E2	Eco-efficiency
EA	Environmental Accounting
EBI	Energy Bioscience Institute
ECCP	European Climate Change Program
ECF	Elemental Chlorine Free
ECLAC	Economic Commission for Latin America and the Caribbean
ECPP	Environmental Cooperative Pilot Program
ECX	European Climate Exchange
E-DRAM	Environmental Dynamic Revenue Assessment Model
EE	Energy Efficiency
EEl	Edison Electric Institute
EERE	U.S. DOE Office of Energy Efficiency and Renewable Energy
EF	Efficiency Factor
EF	Ecological Footprint
EIA	Energy Information Administration
EIA	Environmental Impact Assessment
EJ	Environmental Justice
EJAC	Environmental Justice Advisory Committee
EMFAC	Emissions Factors Model
EMIC	Earth-system model of intermediate complexity
EMS	Environmental Management System
ENSO	El Niño-Southern Oscillation

Acronyms

Acronym	Definition
EO	Executive Order
EOL	End-of-Life
EPA	Environmental Protection Agency
EPAct	Energy Policy Act of 1992 (California)
EPER	European Pollutant Emission Register
EPOC	Environment Policy Committee
EPP	Environment Preferred Products or Environmentally Preferred Purchasing
EPPA	Anthropogenic Emission Prediction and Policy Analysis
EPPA-HHL	EPPA High-Emissions Scenario
EPPA-LLH	EPPA Low-Emissions Scenario
EPEAT	Electronic Product Environmental Assessment Tool
EPRI	Electric Power Research Institute
EPS	Emissions Performance Standard
ERP	Environmental Results Program
ERU	Emissions Reduction Unit
ESCo	Energy Service Companies
ESCo	Environmental, Social and Governance
ESP	Energy Service Provider(s)
ET	Evapo-transpiration
ETAAC	Economic and Technology Advancement Advisory Committee
ETG	Evaluation Task Group (of the Accreditation Body's Accreditation Committee)
ETI	Ethical Trading Initiative
EU	European Union
EU15	The 15 Countries in the European Union before the expansion on May 1, 2004
EU25	The 25 Countries in the European Union after the expansion on May 1, 2004, but prior to January 1, 2004
EU-ETS	European Union - Emission Trading Scheme
EVR	Enhanced Vapor Recovery

Acronyms

Acronym	Definition
EWS	Early-warning System(s)
FACE	Free-air Carbon Dioxide Enrichment
FAMS	Fleet Assessment Management System
FAO	Food and Agriculture Organization
FAR	Fourth Assessment Report (IPCC, 2007)
FCC	Fluidized Catalytic Cracking
FFF	Food, Fiber and Forestry
FFFF	Food, Fiber, Forestry and Fishery
FJD	First Jurisdictional Distributor
FRAP	Fire and Resources Assessment Program
FSC	Forest Stewardship Council
GAAP	Generally Accepted Accounting Principle
GB	Green Building
GBP	Green Building Program
GBR	Great Barrier Reef
GC	Green Chemistry
GCM	General Circulation Model
GCV	Gross Caloric Value
GCO₂E/MJ	Grams of CO ₂ Equivalent per Mega-Joule
GDP	Gross Domestic Product
GEF	Global Environmental Facility
GEOSS	Global Earth Observation System of Systems
GHGP	Greenhouse Gas Protocol
GIMMS	Global Inventory Modeling and Mapping Studies
GIS	Gas Insulated Substation(s)
GIS	Geographic Information System
GISS	Goddard Institute for Space Studies
GLOF	Glacial Lake Outburst Flood
GMAT	Global Mean Annual Temperature

Acronyms

Acronym	Definition
GMT	Global Mean Temperature
GNP	Gross National Product
GOA	Guidance on Accreditation for Verification Bodies
GPP	Gross Primary Production
GPS	Global Positioning System
GR	Green Remediation
GRI	Global Resources Initiative
GRI	Global Reporting Initiative
GRP	General Reporting Protocol
GSC	General Stationary Combustion
GSP	Gross State Product
GVP	General Verification Protocol
GVW	Gross Vehicle Weight
GWh	Gigawatt Hours
GWP	Global Warming Potential
GWP	Global Water Partnership
HABs	Harmful Algal Blooms
HANPP	Human Appropriation of Net Primary Productivity
HCCI	Homogenous Charge Compression Ignition
HCD	Housing and Community Development (California)
HDPE	High-Density Polyethylene
HERS	Home Energy Rating System
HFC	Hydrofluorocarbon(s) (a high GWP gas)
HFE	Hydrofluoroether(s)
HHV	Higher Heating Value
HIV	Human Immunodeficiency Virus
HPS	Hantavirus Pulmonary Syndrome
HSC	Health and Safety Code
HSR	High Speed Rail

Acronyms

Acronym	Definition
HVAC	Heating, Ventilation and Air Conditioning System
HYV	High-yield Varieties
IAF	International Accreditation Forum
IAM	Integrated Assessment Model
IAS	Invasive Alien Species
IC	Internal Combustion
IC	Institutional Control
ICAP	International Carbon Action Partnership
ICLEI	International Council for Local Environmental Initiatives (Local Governments for Sustainability)
ICLIPS	Integrated Assessment of Climate Protection Strategies
ICM	Integrated Coastal Management
ICZM	Integrated Coastal Zone Management
IEPR	Integrated Energy Policy Report
IEQ	Indoor Environmental Quality
IETA	International Emissions Trading Association
IFRCRC	International Federation of Red Cross and Red Crescent Societies
IGBP	International Geosphere-Biosphere Program
IGEM	Institution of Gas Engineers and Managers
IHDP	International Human Dimensions Program
IIASA	International Institute for Applied Systems Analysis
IID	Imperial Irrigation District
I/M	Inspection and Maintenance (smog check)
IOCARIB	Intergovernmental Oceanographic Commission Regional Sub-Commission for the Caribbean and Adjacent Regions Global Observing Plan
INAP	Integrated National Pilot Adoption Plan
IOD	Indian Ocean Dipole
IOUs	Investor Owned Utilities
IPCC	Intergovernmental Panel on Climate Change

Acronyms

Acronym	Definition
IPO	Inter-decadal Pacific Oscillation
IRRI	Intergovernmental Rice Research Institute
ISO	International Organization for Standardization
ISO 14064 Part 3	International Standard on Greenhouse Gases - Specification with guidance for the validation and verification of GHG assertions
ISO 14065	International Standard on Greenhouse Gases - Requirements for GHG validation and verification bodies for use in accreditation and other forms of recognition
ISR	Indirect Source Rule(s)
IT	Information Technology
ITCZ	Intertropical Convergence Zone
ITTO	International Tropical Timber Organization
IUCN	International Union for the Conservation of Nature and Natural Resources (World Conservation Union)
JFM	January, February, March
JI	Joint Implementation
JJA	June, July, August
Kg	Kilogram(s)
KPI	Key Performance Indicator
kW	Kilowatt
kWh	Kilowatt-hour
kWh/y	Kilowatt-hours per year
LA	Latin America
LADWP	Los Angeles Department of Water and Power
LAI	Leaf Area Index
LBA	Large Scale Biosphere-Atmosphere (experiment)
lb	Pound
lb/yd³	Pound per Cubic Yard
LC	Life Cycle
LCA	Life Cycle Assessment, also Life Cycle Analysis
LCCP	Lifecycle Climate Performance

Acronyms

Acronym	Definition
LCD	Liquid Crystal Display
LCFS	Low Carbon Fuel Standard
LDAR	Leak Detection and Repair
LCD	Less/Least Developed Countries
LDPE	Low-Density Polyethylene
LDT	Light-Duty Truck
LDV	Light-Duty Vehicle
LED	Light Emitting Diode
LEED	Leadership in Energy and Environmental Design
LEED-EB	Leadership in Energy and Environmental Design for Existing Buildings
LEED-NC	Leadership in Energy and Environmental Design for New Construction
LFG	Landfill Gas
LGA	Local Government Authority
LGM	Last Glacial Maximum
LGP	Length of Growing Period
LHV	Lower Heating Value
LIA	Little Ice Age
LID	Low Impact Design
LIQB	Low-Income Oversight Board
LNG	Liquefied Natural Gas
LOHAS	Lifestyles of Health and Sustainability Consumers
LPG	Liquefied Petroleum Gas
LPJ	Lund-Potsdam-Jena (model)
LSI	Large-Spark Ignition
LULUCF	Land Use, Land-use Change and Forestry
MA	Millennium Ecosystem Assessment
MAC	Market Advisory Committee
MACC	Mainstreaming Adaptation to Climate Change in the Caribbean
NAF	Million Acre Feet

Acronyms

Acronym	Definition
LCD	Liquid Crystal Display
MAMJ	March, April, May, June
MARA/ARMA	Mapping Malaria Risk in Africa/Atlas du Risque de la Malaria en Afrique
MASL	Meters Above Sea Level
M&E	Monitoring and Evaluation
MCA	Multi-criteria Analysis
MCeX	Montreal Climate Exchange
MDB	Murray-Darling Basin
MDG	Millennium Development Goals
MEA	Multilateral Environmental Agreement
MER	Market Exchange Rates
MERV	Minimum Efficiency Reporting Value
MGA	Midwest GHG Reduction Accord
MIT	Massachusetts Institute of Technology
MJO	Madden-Julian Oscillation
MMBtu	1 million British thermal units
MMT	Million metric tons
MMTCO₂	Million metric tons of CO ₂
MMTCO₂E	Million metric tons of CO ₂ equivalents
MNA	Monitored Natural Attenuation
MOC	Meridional Overturning Circulation
mph	Miles per Hour
MPO	Metropolitan Planning Organization
MRF	Material Recovery Facility
MTCO₂E	Metric ton of CO ₂ Equivalents
MTE	Mediterranean-type Ecosystems
MVAC	Motor Vehicle Air Conditioning
MW	Megawatt
MWh	Megawatt-hour(s)

Acronyms

Acronym	Definition
MWh/Af	Megawatt hours per Acre-foot
MY	Model Year
NA	Not Applicable
N2O	Nitrous oxide (a GWP gas)
NAH	North Atlantic Sub-tropical High
NAO	North Atlantic Oscillation
NAPA	National Adaptation Programme of Action
NBP	Net Biome Productivity
NC	National Communication
NCAR-PCM	National Center for Atmospheric Research Parallel Climate Model
NDVI	Normalized Difference Vegetation Index
NEP	Net Ecosystem Productivity
NEPA	National Environmental Policy Act
NEPAD	New Partnership for Africa's Development
NESHAP	National Emissions Standard for Hazardous Air Pollution
NF3	Nitrogen Trifluoride
NGO	Non-Governmental Organization
NH3	Ammonia
NHT	Northern Hemisphere Temperature
Nm	Nautical Miles
N2O	Nitrous oxide
NOx	Nitrogen oxides
NPP	Net Primary Productivity
NPV	Net Present Value
NRC	National Research Council
NREL	U.S. DOE National Renewable Energy Laboratory
NSHP	New Solar Homes Partnership

Acronyms

Acronym	Definition
NSW	New South Wales
NT	Northern Territory
NTFP	Non-timber Forest Products
NWMP	National Water Management Plan
NZ	New Zealand
ODA	Official Development Assistance
ODS	Ozone-Depleting Substance
OEC	Operations and Environmental Compliance Program
OECA	Office of Enforcement and Compliance Assurance (Federal)
OECD	Organization for Economic Co-operation and Development
O&G	Oil and Gas
OEM	Original Equipment Manufacturers
OND	October, November, December
OPR	Office of Planning and Research
OPSC	Office of Public School Construction
P	Purification
P2	Pollution Prevention
PAHO	Pan-American Health Organization
PAYD	Pay-As-You-Drive
PC	Passenger Cars
PCF	Process Chlorine Free
PCOR	Plains CO ₂ Reduction Partnership
PCR	Post Consumer Recycled
PCW	Post Consumer Waste
PDF	Probability Density Function
PDI	Power Dissipation Index
PDO	Pacific Decadal Oscillation
PDSI	Palmer Drought Severity Index
P-E	Precipitation-evaporation
PEAC	Pacific Enso Applications Center

Acronyms

Acronym	Definition
PERS	Public Employees Retirement System (California)
PET	Polyethylene terephthalate
PFC	Perfluorocarbon(s) (a high GWP gas)
PFPE	Perfluoropolyether(s)
PFT	Plant Function Types
PG&E	Pacific Gas and Electric
PIA	Participatory Integrated Assessment
PIER	Public Interest Energy Research
PI-GCOS	Pacific Islands Global Climate Observing System
P-IND	Pre-Industrial
PLA	Poly lactide or Polylactic acid, a corn-based material
PM	Particulate Matter
PM2.5	Particulate Matter less than 2.5 microns
POU	Publicly Owned Utilities
PP	Polluter pays” Principle
PPA	Power Partnership Agreement
ppb	Parts per billion
ppm	Parts per million
PPP	Purchasing Power Parity
PRA	Participatory Rural Appraisal
PRB	Permeable Reactive Barrier
PUC	Public Utilities Commission
PV	Photovoltaic
PCV	Polyvinyl chloride
QLD	Queensland
RA	Resources Agency
RAC	Refrigeration and Air Conditioning
RCx	Retro-commissioning

Acronyms

Acronym	Definition
RCM	Regional Climate Model
RD&D	Research, Development and Demonstration
RE	Recycling
RE	Renewable Energy
REC	Renewable Energy Credit
RECLAIM	Regional Clean Air Incentive Market
RETI	Renewable Energy Transmission Initiative
RFA	Request for Application(s)
RFS	Renewable Fuel Standard
RG	Regeneration
RGGI	Regional Greenhouse Gas Initiative
RIN	Renewable Identification Number
RM	Resource Minimization
ROG	Reactive Organic Gas
RPS	Renewable Portfolio Standard
RRA	Rapid Rural Appraisal
RSLR	Relative Sea-level Rise
RTP	Regional Transportation Plan
RU	Reuse
SAB	State Allocation Board
SACOG	Sacramento Area Council of Governments
SACZ	South Atlantic Convergence Zone
SAP	Structural Adjustment Program
SAR	Second Assessment Report (IPCC, 1996)
SAS	Storyline and Simulation
S&P500	Standard & Poor's 500
SB	Senate Bill
SBW	Spruce Bud Worm
SCAPE	Soft Cliff and Platform Erosion (model)

Acronyms

Acronym	Definition
SCAQMD	South Coast Air Quality Management District
SCC	Standards Council of Canada
SCE	Southern California Edison
SCM	Supplementary Cementitious Material
SD	Statistical Downscaling
SDG&E	San Diego Gas and Electric
SDSM	Statistical Downscaling Model
SEA-FRAME	Sea-level Fine Resolution Acoustic Measuring Equipment
SEP	Supplemental Environmental Projects or Programs
SERG	Smart Energy Resource Guide (U.S. EPA)
SFP	School Facility Programs
SF6	Sulfur hexafluoride (a high GWP gas)
SFI	Sustainable Forestry Initiative
SGIP	Self-Generation Incentive Program
SHGC	Solar Heat Gain Coefficient
SHWEA	Solar Hot Water Efficiency Act
SIA	Semiconductor Industry Association
SIDS	Small Island Developing States
SIP	State Implementation Plan
SL	Secondary Loop
SLR	Sea-level Rise
SM	Supplementary Material
SME	Small - Medium Enterprise
SMUD	Sacramento Municipal Utility District (California)
SO2	Sulfur dioxide
SO4	Sulfate
SOx	Sulfur oxide
SCAB	South Coast Air Basin (California)
SON	September, October, November

Acronyms

Acronym	Definition
SPCZ	South Pacific Convergence Zone
SR	Source Reduction
SRES	Special Report on Emissions Scenarios
SST	Sea Surface Temperature
STAR	Science to Achieve Results
STC	Sound Transmission Class
STIP	State Transportation Improvement Program
STRS	State Teachers Retirement System (California)
SRF	Sustainable Remediation Forum
SUV	Sport Utility Vehicle
SWE	Snow Water Equivalent
SWP	State Water Project
SWRCB	State Water Resources Control Board
TAR	Third Assessment Report (IPCC, 2002)
T&D	Transmission and Distribution
TBD	To Be Determined
TBE	Tick-borne Encephalitis
TBL	Triple Bottom Line (Economic, Environmental, Social)
TCF	Totally Chlorine Free
TCR	The Climate Registry
TEAP	Technology and Economic Assessment Panel
TEJ	Tropical Easterly Jet
TEK	Traditional Ecological Knowledge
TGICA	Task Group on Data and Scenario Support for Impact and Climate Analysis
THC	Thermohaline Circulation
TNS	The Natural Step (Dr. Karl Hendrick Robert)
TOGA	Tropical Ocean-Global Atmosphere
TOPEX	Ocean Topography Experiment
TRF	Totally Recycled Fiber

Acronyms

Acronym	Definition
TRI	Toxic Release Inventory
TRU	Transport Refrigeration Units
TWA	Tolerable Windows Approach
UC	University of California
UHI	Urban Heat-island
UK	United Kingdom
UK CIP	United Kingdom Climate Impacts Program
UK ETS	United Kingdom Emission Trading Scheme
UNDP	United Nations Development Program
UNEP	United Nations Environment Program
UNFCCC	United Nations Framework Convention on Climate Change
US	United States (of America)
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USGBC	United States Green Building Council
UTO	Useful Thermal Output
UV	Ultraviolet
UVR	Ultraviolet Radiation
VB	Verifying Body
VBD	Vector-borne Disease
VCU	Voluntary Carbon Unit (under VCX)
VCX	Voluntary Climate Exchange
VER	Verified Emissions Reduction
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound(s)
VPI	Value Producing Items
VSR	Vessel Speed Reduction
VT	Visible Transmittance
VVB	Validation and Verification Body
WA	Western Australia

Acronyms

Acronym	Definition
WAIS	West Antarctic Ice Sheet
WAMU	West African Monetary Union
WBSCD	World Business Council for Sustainable Development
WBD	Water-borne Disease
WCI	Western Climate Initiative
WCRP	World Climate Research Program
WE	Western Europe
WECC	Western Electricity Coordinating Council
WG	Working Group (of the IPCC)
WHO	World Health Organization
WM	Waste Minimization
WHO	World Health Organization
WMO	World Meteorological Organization
WNV	West Nile Virus
WRI	World Resources Institute
WTE	Waste-To-Energy
WTO	World Trade Organization
WWW	World Weather Watch
ZEV	Zero Emissions Vehicle
ZNE	Zero Net Energy
ZW	Zero Waste

Sources include:

California Air Resources Board (ARB)

The Climate Registry (TCR)

Intergovernmental Panel on Climate Change (IPCC) Greenhouse Gas Protocol (GHGP)

Terminology

Term	Definition
Accreditation ³	Third-party attestation related to a Validation or Verification Body conveying formal demonstration of its competence to carry out specific validation or verification tasks.
Accreditation Body ³	Authoritative body that performs accreditation. Note: the authority of an Accreditation Body is generally derived from government.
Accreditation Symbol ³	The symbol issued by an Accreditation Body, to be used by the accredited Verification Body to indicate its accredited status. For example, an ANSI accredited Verification Body may use an ANSI logo with the name of the appropriate standard and a unique accreditation number to demonstrate that they have been accredited.
Accuracy ¹	The closeness of the agreement between the result of the measurement and the true value of the particular quantity (or a reference value determined empirically using internationally accepted and traceable calibration materials and standard methods), taking into account both random and systematic factors.
Activity Data ^{2,3}	Data on the magnitude of a human activity resulting in emissions or reductions taking place during a given period of time. Data on energy use, miles traveled, input material flow, and product output are all examples of activity data that might be used to compute GHG emissions.
Adverse Verification Opinion ¹	A verification opinion rendered by a verification body stating that the verification body cannot say with reasonable assurance that submitted emissions data report is free of material misstatement, or that it cannot provide a qualifying statement that the emissions data report conforms to the requirements of this article.
Aerosols ²	A collection of airborne solid or liquid particles, with a typical size between 0.01 -10 micrometer that reside in the atmosphere for at least several hours. Aerosols may be of either natural or anthropogenic origin. Aerosols may influence climate in several ways; directly through scattering and absorbing radiation, and indirectly by acting as cloud condensation nuclei or modifying the optical properties and lifetime of clouds.
Afforestation ²	The planting of new forests on lands that historically has not contained forests.
Agrifiber	Particleboard or composite panel containing straw or hemp or other fibrous materials
Air Pollutant ²	Any man-made and/or natural substance occurring in the atmosphere that may result in adverse effects to humans, animals, vegetation and/or materials.
Allocation ²	Process by which emission allowances are periodically distributed both initially and on an on-going basis under an emission cap and trade system

Terminology

Term	Definition
Allowance²	An authorization to emit, during a specified year, up to one ton of carbon dioxide equivalent.
Alternative Building System	Any building system that attempts to address the issues of ecological sustainability by changing the practices in traditional building systems that are presently or potentially harmful to the environment.
Alternative Energy⁴	Fuel sources that are other than those derived from fossil fuels. Typically used interchangeably for renewable energy. Examples include: wind, solar, biomass, wave and tidal energy. Alternative energy is a term used for some energy sources, and energy storage technologies. Generally, it indicates energies that are non-traditional and have low environmental impact. The term alternative is used to contrast with fossil fuels according to some sources, and some sources may use it interchangeably with renewable energy.
Annex I Countries⁴	Countries listed in Annex I to the UNFCCC. This annex contains the list of industrialized countries and economies in transition (EITs) participating in the non-binding Convention commitment to reducing GHG levels to 1990 levels by the year 2000, which include: Australia, Austria, Belarus, Belgium, Bulgaria, Canada, Croatia, Czech Republic, Denmark, European Economic Community, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Liechtenstein, Lithuania, Luxembourg, Monaco, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russian Federation, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom of Great Britain and Northern Ireland, and United States of America.
Annex II Countries⁴	Countries listed in Annex II of the UNFCCC Convention. These include the OECD members of Annex I, but not the economies in transition (EITs). Annex II parties are required to contribute resources via the Convention's financial mechanism to help developing countries to undertake emissions reduction activities under the Convention and to help them adapt to adverse effects of climate change, and promote the development and transfer of environmentally friendly technologies to EITs and developing countries.
Annex B⁴	The 39 emissions-capped industrialized countries and economies-in-transition listed in Annex B of the Kyoto Protocol. Legally-binding emission reduction obligations for Annex B countries range from an 8% decrease to a 10% increase (Iceland) on 1990 levels by the first commitment period of the Protocol, 2009 – 2012. The terms Annex 1 (of the UNFCCC Convention) and Annex B (of the Kyoto Protocol) are used interchangeably.
Annual¹	With a frequency of once a year; unless otherwise noted, annual events such as reporting requirement will be based on the calendar year.

Terminology

Term	Definition
ANSI Accreditation Committee (ACC)³	The ANSI Accreditation Committee for product certification programs established by the ANSI Board of Directors to be responsible for the operational aspects of ANSI's accreditation programs and related activities, except as otherwise provided in ANSI Bylaws or in procedures approved by the ANSI Conformity Assessment Policy Committee and Board of Directors.
ANSI GHG Advisory Committee³	The advisory Committee was created by the ACC to support this policy committee on accreditation matters related to GHG Validation/ Verification Bodies and to provide input and guidance in the implementation of ANSI GHG accreditation programs.
Anthropogenic²	In the context of greenhouse gas inventories, "anthropogenic" refers to greenhouse gas emissions and removals that are a direct result of human activities or are the result of natural processes that have been affected by human activities.
Asphalt Blowing¹	The process by which air is blown through asphalt flux to change the softening point and penetration rate.
Appeal³	Request by the client or responsible party to the Validation or Verification Body for reconsideration of a decision it has made in relation to the validation or verification.
Applicant³	A firm, or lead firm (if part of a team), responding to a request for application (RFA) for Verification Bodies.
Assessment³	Process undertaken by an Accreditation Body to assess the competence of a conformity assessment body (Verification Body), based on particular standard(s) and/or other normative documents and for a defined scope of accreditation. Note: Assessing the competence of a Verification Body involved assessing the competence of the entire operations of the Verification Body, including the competence of the personnel, the validity of the conformity assessment methodology and the validity of the conformity assessment results.
Assessor³	Person assigned by an Accreditation Body to perform, alone or as a part of an assessment team, an assessment of a validation or Verification Body.
Asset Controlling Supplier¹	Any entity that operates electricity generating facilities or serves as an exclusive marketer for certain generating facilities even though it does not own them.
Asset Owning Supplier¹	Any entity owning electricity generating facilities that delivers electricity to a transmission or distribution line.
Associated Gas¹	A natural gas that is produced from gas wells or gas produced in association with the production of crude oil.

Terminology	
Term	Definition
Assigned Amount	A tradable unit of one metric ton of CO ₂ equivalent. The assigned amount is the total amount of greenhouse gas that each Annex B country is allowed to emit during the first commitment period of the Kyoto Protocol. These emission rights are allocated in mandatory schemes by the regulator; no additional allowances can be created.
ASTM	American Society of Testing and Materials is an organization that develops voluntary standards for a wide range of industries from petroleum, paint, flooring, environmental siting, and more.
Atmosphere	The gaseous envelope surrounding the Earth. The dry atmosphere consists almost entirely of nitrogen (78.1% volume mixing ratio) and oxygen (20.9% volume mixing ratio), together with a number of trace gases, such as argon (0.93% volume mixing ratio), helium and radiatively active greenhouse gases such as carbon dioxide (0.035% volume mixing ratio) and ozone. In addition, the atmosphere contains the greenhouse gas water vapor, whose amounts are highly variable but typically around 1% volume mixing ratio. The atmosphere also contains clouds and aerosols.
Avoided Deforestation⁴	Avoided deforestation is the concept where countries are paid to prevent deforestation that would otherwise occur. Funds come from industrialized countries seeking to meet emissions commitments under international agreements like the Kyoto Protocol. Policy makers and environmentalists alike find the idea attractive because it could help fight climate change at a low cost while improving living standards for some of the world's poorest people, safeguarding biodiversity, and preserving other ecosystem services. When trees are cut greenhouse gases are released into the atmosphere - roughly 20 percent of annual emissions of such heat-trapping gases result from deforestation and forest degradation.
Barrel¹	A volume equivalent to 42 U.S. gallons.
Baseline Emissions²	A baseline is a measurement, calculation, or time used as a basis for comparison. Baseline emissions are the level of emissions that would occur without policy intervention or without implementation of a project. Baseline estimates are needed to determine the effectiveness of emission reduction programs (also called mitigation strategies).
Base Year²	The starting year for the inventory. Targets for reducing GHG emissions are often defined in relation to the base year. Under AB 32, the base year for California's greenhouse gas inventory is 1990.
Base Year³	A specific year against which an entity's emissions are tracked over time. For the purposes of the Registry, the Reporter's base year is defined as the earliest year for which a complete emissions inventory is submitted.
Base Year Emissions³	GHG emissions in the base year.

Terminology	
Term	Definition
Batch Verification³	Verification process arranged by the Registry for multiple Reporters with relatively simple GHG emissions (less than 1000 metric tons of CO ₂ e emissions, and no significant process or fugitive emissions).
Berkeley Energy and Resource (Bear) Model³	Dynamic general equilibrium forecasting model that simulates the way that changes in energy investment, price, and use affect how Californians live their lives.
Best Available Data And Methods¹	ARB methods for emissions calculations set forth in the article where reasonably feasible; or facility fuel use and other facility process data used in conjunction with ARB provided emission factors and other data; or other generally accepted methods for calculating greenhouse gas emissions.
Biocompostable	Plastic and paper products which disintegrate and biodegrade completely and safely when composted in a municipal or commercial facility. The process of biocomposting is usually completed within 90 days.
Biodegradable	Materials that decompose, usually by bacteria or sunlight, into original organic components within a reasonably short period of time. Most organic materials (paper, grass clippings, food scraps), under the right conditions, are biodegradable.
Biofuel³	Fuel made from biomass, including wood and wood waste, sulphite lyes (black liquor), vegetable waste (straw, hay, grass, leaves, roots, bark, crops), animal materials, waste (fish and food meal, manure, sewage sludge, fat, oil and tallow), turpentine, charcoal, landfill gas, sludge gas, and other biogas, bioethanol, biomentanol, bio ETBE, bioMTBE, biodiesel, biodimethylether, Fischer tropsch, bio oil, and all other liquid biofuels which are added to, blended with, or used straight as transportation diesel fuel. Biomass also includes the plant or animal fraction of flotsam from water body management, mixed residues from food and beverage production, composites containing wood, textile wastes, paper, cardboard and pasteboard, municipal and industrial waste, and processed municipal and industrial wastes.
Biogenic²	Produced by the biological processes of living organisms. Note that the term "biogenic" refers only to recently produced (that is non-fossil) material of biological origin. IPCC guidelines recommend that peat be treated as a fossil carbon because it takes a long time to replace harvested peat.
Biogenic Carbon³	Carbon derived from biogenic (plant or animal) sources excluding fossil carbon.
Biogeochemical Cycle²	Movements through the Earth system of key chemical constituents essential to life, such as carbon, nitrogen, oxygen, and phosphorus.
Biomass²	(1) The total mass of living organisms in a given area or of a given species usually expressed as dry weight; or (2) Organic matter consisting of or recently derived from living organisms (especially regarded as fuel) excluding peat. Includes products, by-products and waste derived from such material.

Terminology

Term	Definition
Biomass³	Non-fossilized and biodegradable organic material originating from plants, animals, and micro-organisms, including products, byproducts, residues, and waste from agriculture, forestry and related industries as well as the non-fossilized and biodegradable organic fractions of industrial and municipal wastes, including gases and liquids recovered from the decomposition of non-fossilized and biodegradable organic material.
Biomass-derived Fuel¹	Fuels derived entirely from biomass.
Biomass Waste²	Organic non-fossil material of biological origin that is a byproduct or a discarded product. "Biomass Waste" includes municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural crop byproducts, straw, and other biomass solids, liquids, and gases; but excludes wood and wood-derived fuels (including black liquor), biofuels feedstock, biodiesel, and fuel ethanol. Note: EIA "biomass waste" data also include energy crops grown specifically for energy production which would not normally constitute waste.
Bioplastic	Plastics made from corn, potato, or other annually renewable sources which are compostable and biodegradable.
Black Carbon²	Operationally defined aerosol species based on measurement of light absorption and chemical reactivity and/or thermal stability; consists of soot, charcoal, and/or possible light absorbing refractory organic matter.
Bottom Ash¹	Ash that collects at the bottom of a combustion chamber.
Bottoming Cycle Plant¹	A cogeneration facility in which the energy input to the system is first applied to a useful thermal energy application or process, and at least some of the reject heat emerging from the application process is then used for power production.
Boundaries³	GHG accounting and reporting boundaries can have several dimensions, i.e., organizational, operational, and geographic. These boundaries determine which emissions are accounted for and reported by the entity.
British Thermal Unit¹	The quantity of heat required to raise the temperature of one pound of water by one degree Fahrenheit at about 39.2 degrees Fahrenheit.
Building-related Illness	An illness caused by an identifiable agent in the indoor air. The cause is typically biological, such as mold, but may also be chemical (e.g., formaldehyde). Symptoms may be flu-like, but they may also lead to serious diseases such as Legionnaires, and hypersensitivity pneumonitis.
Busbar¹	The power conduit of an electricity generating facility that serves as the starting point for the electricity transmission system.

Terminology

Term	Definition
Butane¹	A normally gaseous straight-chain or branch chain hydrocarbon extracted from natural gas or refinery fuel gas streams and is represented by the chemical formula C ₄ H ₁₀ . Butane includes normal butane and refinery-grade butane.
Bypass Dust¹	Discarded dust from bypass system de-dusting unit of suspension preheater, precalciner and grate pre-heater kilns, consisting of fully calcined kiln feed material.
CAISO Markets¹	The CAISO real-time market and the CAISO integrated forward market.
Calcination¹	The thermal decomposition of carbonate minerals, such as calcium carbonate (the principal mineral in limestone) to form calcium oxide in a cement kiln.
Calcine¹	To heat a substance so that it oxidizes or reduces.
Calculation-Based³	Any of the various emission quantification methodologies that involve the calculation of emissions based on emission factors and activity data such as input material flow, fuel consumption, or product output.
Calendar Year¹	The time period from January 1 through December 31.
California Climate Action Registry (CCAR)²	A private non profit organization originally formed by the State of California. The California Registry serves as a voluntary greenhouse gas (GHG) registry to protect and promote early actions to reduce GHG emissions by organizations.
California Eligible Renewable Resource¹	An electricity generating facility that the California Commission has certified as an eligible renewable energy resource that may be used by a retail seller of electricity to satisfy its California Renewables Portfolio Standard Program procurement requirements, consistent with Public Utilities Code sections 399.11 through 399.16 and Public Resources code sections 25740 through 25751.
California Energy Commission¹	The California Energy Resources Conservation and Development Commission.
California Integrated Forward Market¹	The electric power market conducted by the CAISO that determines the best use of resources available while finding the least cost method of procuring required components.
Cap²	A limit on emissions.
Cap and Trade System^{1, 2}	A system for reducing emissions that draws on market mechanisms/ incentives to reduce emissions in a cost-effective and flexible manner. Cap-and-trade systems create a financial incentive for emission reductions by assigning a cost to polluting. A "cap", set by regulators, limits emissions from a designated group of polluters to a level lower than current emissions. The emissions allowed under the new cap are then divided up into individual permits - usually equal to one ton of pollution. Companies are free to buy and sell permits in order to continue operating in the most profitable manner available to them. So, those that are able to reduce emissions at a low cost can sell ("trade") their extra permits to companies facing high costs.

Terminology	
Term	Definition
Cap and Trade System^{1,2} (cont)	An environmental regulatory program that limits (caps) the total emissions of a certain pollutant by issuing tradable allowances and requiring that allowances be surrendered to cover actual emissions. The limit on the number of tradable allowances ensures that emissions will not exceed the desired amount.
Capacity Factor¹	The amount of energy that an electricity generating facility actually generates compared to its maximum rated output over a given period of time, usually one year.
Capital Lease³	A lease which transfers substantially all the risks and rewards of ownership to the lessee and is accounted for as an asset on the balance sheet of the lessee. Also known as a finance lease or financial lease. Leases other than capital or finance leases are operating leases.
Carbon Cycle²	All parts (reservoirs) and fluxes of carbon. The cycle is usually through of as four main reservoirs of carbon interconnected by pathways of exchange. The reservoirs are the atmosphere, terrestrial biosphere (usually includes freshwater systems), oceans, and sediments (includes fossil fuels). The annual movements of carbon, the carbon exchanges between reservoirs, occur because of various chemical, physical, geological, and biological processes. The ocean contains the largest pool of carbon near the surface of the Earth, but most of that pool is not involved with rapid exchange with the atmosphere.
Carbon Dioxide¹	The most common of the six primary greenhouse gases, consisting on a molecular level of a single carbon atom and two oxygen atoms.
Carbon Dioxide²	A naturally occurring gas, and also a by-product of burning fossil fuels and biomass, as well as land-use changes and other industrial processes. It is the principal anthropogenic greenhouse gas that affects the Earth's radiative balance. It is the reference gas against which other greenhouse gases area measures and therefore has a Global Warming Potential of 1.
Carbon Dioxide Equivalent (CO₂e)^{1,2}	A measure for comparing carbon dioxide with other GHGs, based on the quantity of those gases multiplied by the appropriate global warming potential (GWP) factor and commonly expressed as metric tonnes of carbon dioxide equivalents (MTCO ₂ e). A metric used to compare emissions of various greenhouse gases. It is the mass of carbon dioxide that would produce the same estimated radiative forcing as a given mass of another greenhouse gas. Carbon dioxide equivalents are computed by multiplying ahe mass of the gas emitted by its global warming potential.
Carbon Equivalent (CE)²	The metric measure used to compare the emissions of the different greenhouse gases based upon their global warming potential. Carbon Equivalents can be calculated from two carbon dioxide equivalents by multiplying the carbon dioxide equivalents by 12/44 (ratio of the molecular weight of carbon to that of carbon dioxide). The use of carbon equivalent is declining in GHG inventories.

Terminology	
Term	Definition
Carbon Footprint⁴	The total amount of carbon dioxide attributable to the actions of an individual (mainly through their energy use) over a period of one year. The term owes its origins to the idea that a footprint is what has been left behind as a result of the individual's activities. Carbon footprints can either consider direct emissions (typically from energy used in the home and in transport, including travel by cars, airplanes, rail and other forms of transportation, or can also include indirect emissions (including CO ₂ and other GHG emissions emitted over the full life cycle of goods and services consumed). Carbon footprints are generally measured in tons of CO ₂ e.
Carbon Intensity²	The amount of carbon by weight emitted per unit of energy consumed. Intensity of an energy supply, defined as the amount of carbon emitted per unit of energy. A common measure of carbon intensity is weight of carbon per British thermal unit (Btu) of energy. When there is only one fossil fuel under consideration, the carbon intensity and the emissions coefficient are identical. When there are several fuels, carbon intensity is based on their combined emissions coefficients weighted by their energy consumption levels.
Carbon Neutral⁴	On balance, something does not release any carbon dioxide into the atmosphere. It is possible to release CO ₂ into the atmosphere and still be carbon neutral, so long as it is balanced by a CO ₂ reduction elsewhere.
Carbon Offsets⁴	A credit for negating or diminishing the impact of emitting a ton of carbon dioxide by paying someone else to absorb or avoid the release of a ton of CO ₂ elsewhere.
Carbon Sequestration²	The capture of CO ₂ from the atmosphere and its long term storage in oceans (oceanic carbon sequestration), in biomass and soils (terrestrial carbon sequestration) or in underground reservoirs (geologic carbon sequestration).
Carbon Sinks⁴	Projects that capture and store carbon in a manner that prevents it from being released into the atmosphere for a specified period of time, the storage area is commonly referred to as a carbon sink. Carbon sinks can serve to partially offset greenhouse gas emissions. Forests and oceans are large carbon sinks.
Carcinogenic	Any substance or agent that causes or tends to cause cancer.
Carpet and Rug Institute Green Label Indoor Air Quality Test Program	A scientific testing and labeling program for carpets, cushions and adhesives. This green label identifies low-emitting materials.
Case-Specific Conflict of Interest³	Instances where the ability of a specific Verification Body to render objective GHG verification services to a Reporter may be affected by the nature of other business services provided to the Reporter by the Verification Body or a related organization, shared management and/or financial resources between the Reporter and the Verification Body or a related organization, or other situations created by the Verification Body or another related entity.

Terminology	
Term	Definition
Catalyst ¹	A substance added to a chemical reaction, which facilitates or causes the reaction, and is not consumed by the reaction.
Catalyst Coke ¹	Carbon that is deposited on a catalyst, thus deactivating the catalyst.
Catalyst Cracking ¹	A refinery process of breaking down larger, heavier, and more complex hydrocarbon molecules into simpler and lighter molecules. Catalytic cracking is accomplished by use of a catalyst.
Catalytic Reforming ¹	A refining process using controlled heat and pressure with catalysts to rearrange certain hydrocarbon molecules.
Cement ¹	A building material that is produced by heating mixtures of limestone and other minerals or additives at high temperatures in a rotary kiln to form clinker, followed by cooling and grinding with blended additives. Finished cement is a powder used with water, sand and gravel to make concrete and mortar.
Cementitious Product ¹	Cement, cement kiln dust, cement clinker, clinker dust, fly ash, slag and other pozzolans.
Cement Kiln Dust (CKD) ¹	The fine-grained, solid, highly alkaline waste removed from cement kiln exhaust gas by air pollution control devices. CKD consists of partly calcined kiln feed material, and includes all dust from cement kilns and bypass systems including bottom ash and bypass dust.
Cement Plant ¹	An industrial structure, installation, plant or building primarily engaged in manufacturing Portland, natural, masonry, pozzolanic, and other hydraulic cements, and typically identified by NAICS code 327310.
Certified Emissions Reduction (CER) ⁴	A tradable unit equivalent to one metric ton of CO ₂ emissions reduction that is generated by CDM projects.
Chicago Climate Exchange (CCX) ⁴	An existing membership-based, cap-and-trade system where credits are transacted voluntarily. Members voluntarily sign up to its legally binding reductions policy. The CCX, founded in 2003, is a U.S. corporation, and remains the only emissions reduction and trading system for all six greenhouse gases and the only operational emissions reduction and trading system in North America. CCX has nearly 300 members from all sectors and offset projects worldwide.
Chlorofluoro-carbons (CFCs)	A group of chemical compounds that are responsible for the depletion of the ozone layer. Carbon compounds containing chlorine and fluorine.
Chlorofluoro-carbons (CFCs) ²	Greenhouse gases covered under the 1987 Montreal Protocol and used for refrigeration, air conditioning, packaging, insulation, solvents, or aerosol propellants. Because they are not destroyed in the lower atmosphere, CFCs drift into the upper atmosphere where, given suitable conditions, they break down ozone. These gases are being replaced by other compounds, including hydrochlorofluorocarbons and hydrofluorocarbons, which are greenhouse gases covered under the Kyoto Protocol.

Terminology	
Term	Definition
Clean Development Mechanism (CDM)⁴	Article 12 of the Kyoto Protocol defines the clean development mechanism. "The purpose of the clean development mechanism shall be to assist Parties not included in Annex I in achieving sustainable development and in contributing to the ultimate objective of the Convention, and to assist Parties included in Annex I in achieving compliance with their quantified emission limitation and reduction commitments under article 3." CDM is a provision of the Kyoto protocol that allows developed countries to offset their emissions by funding emissions reduction projects in developing countries. CDM projects generate Certified Emissions Reductions (CERs).
Climate²	Climate is usually defined as the "average weather" or more rigorously as the statistical description in terms of the mean and variability of relevant quantities over a period of time ranging from months to thousands or millions of years. The classical period is 30 years, as defined by the World Meteorological Organization (WMO). These relevant quantities are most often surface variables such as temperature, precipitation, and wind. Climate, in a wider sense, is the state, including a statistical description, of the climate system.
Climate Change²	Climate change refers to a statistically significant variation in either the mean state of the climate, or its variability, persisting for an extended period (typically decades or longer). Climate change may be due to natural internal processes or external forcings, or to persistent anthropogenic changes in the composition of the atmosphere or in land use.
Clinker¹	The mass of fused material produced in a cement kiln from which finished cement is manufactured by milling and grinding.
Coal¹	All solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society for Testing and Materials Designation ASTM D388-05 "Classification of Coals by Rank".
Coal-derived Fuel¹	Any fuel, whether in a solid, liquid or gaseous state, produced by the mechanical, thermal, or chemical processing of coals (e.g., pulverized coal, coal, coal refuse, liquefied or gasified coal, washed coal, chemically cleaned coal, coal-oil mixtures, and coal-derived coke).
Coalition for Environmentally Responsible Economies (CERES)	A 10 point code for environmental conduct established in 1989 to: <ul style="list-style-type: none"> Protect the biosphere Sustainable use of natural resources Reduction and disposal of wastes Energy conservation Risk reduction Safe products and services Environmental restoration Inform the public Management commitment Audits and reports

Terminology	
Term	Definition
Cogeneration²	An industrial structure, installation, plant, building or self-generating facility that has sequential or simultaneous generation of multiple forms of useful energy (usually mechanical or thermal) in a single, integrated system.
Cogeneration³	An energy conversion process in which more than one useful product (e.g., electricity and heat or steam) is generated from the same energy input stream. Also referred to as combined and power (CHP).
Cogeneration Facility¹	An industrial structure, installation, plant, building or self-generation facility, which may include one or more cogeneration systems configured as either a topping cycle or bottoming cycle plant.
Cogeneration System¹	Individual cogeneration components - including prime mover (heat engine), generator, heat recovery, and electrical interconnection configured into an integrated system that provides sequential generation of multiple forms of useful energy (usually mechanical and thermal), at least one form of which the facility consumes on site or makes available to other users for an end-use other than electricity generation.
Coke (Petroleum)¹	A solid residue consisting mainly of carbon which results from the cracking of petroleum hydrocarbons in processes such as coking and fluid coking. This includes catalyst coke deposited on a catalyst during the refining process which must be burned off in order to regenerate the catalyst.
Coke Burn-off¹	Coke removal from the surface of a catalyst by combustion during catalyst regeneration.
Combined Heat and Power²	The simultaneous production of both electricity and useful heat for application by the producer or to be sold to other users with the aim of better utilization of the energy used. Public utilities may utilize part of the heat produced in power plants and sell it for public heating purposes. Industries as auto-producers may sell part of the excess electricity produced to other industries or to electric utilities.
Combined Heat and Power (CHP)³	Same as cogeneration.
Combustion Emissions¹	Greenhouse gas emissions occurring during the exothermic reaction of a fuel with oxygen.
Combustion Source¹	A source of combustion emissions.
Complaint³	Expression of dissatisfaction, other than an appeal, by any person or organization to a Validation or Verification Body or Accreditation Body, relating to the activities of that body, where a response is expected.
Complete Emissions Inventory³	For purposes of The Climate Registry [®] , a complete accounting of an entity's emissions meets all of the requirements specified in The Climate Registry [®] .

Terminology	
Term	Definition
Cogeneration²	An industrial structure, installation, plant, building or self-generating facility that has sequential or simultaneous generation of multiple forms of useful energy (usually mechanical or thermal) in a single, integrated system.
Compliance Market⁴	Markets that conform to a specification, standard or law that has been clearly defined. They are well-known, regulation driven markets such as the European Union's Emissions Trading Scheme (EU-ETS) or the Kyoto Protocol's Clean Development Mechanism (CDM). These markets are large, well-funded and often appear in the media. They are closely followed by traders, media and businesses.
Conflict of Interest¹	A situation in which, because of financial or other activities or relationships with other persons or organizations, a person or body is unable or potentially unable to render an impartial verification opinion of a potential client's objectivity in performing verification services is or might be otherwise compromised.
Conflict of Interest³	Situation in which, because of other activities or relationships, impartiality in performing validation or verification activities is or could be compromised.
Conformity Assessment Body (CAB)³	A Conformity Assessment Body is a body that is accredited to provide conformity assessments under ISO Standards. Note: CABs include certification bodies (including management systems, personnel, product, validation and verification bodies) inspection bodies and laboratories.
Consistency²	An inventory should be internally consistent with all its elements over a period of years. An inventory is consistent if the same methodologies are used for the base and all subsequent years and if consistent data sets are used to estimate emissions or removals from sources or sinks.
Continuous Emissions Monitoring System	The total equipment required to obtain a continuous measurement of a gas concentration or emission rate from combustion or industrial processes.
Continuous Emissions Monitor²	A type of air emission monitoring system installed to operate continuously inside of a smokestack or other emission source.
Control Approach³	An emissions accounting approach for defining organizational boundaries in which an entity reports 100 percent of the GHG emissions from operations under its financial or operational control.
Conveying System¹	A device for transporting materials from one piece of equipment or location to another location within a facility. Conveying systems include, but are not limited to the following: feeders, belt conveyors, bucket elevators, and pneumatic systems.
Cost-Effectiveness²	The cost per unit of reduced emissions of greenhouse gases adjusted for its global warming potential.

Terminology	
Term	Definition
CO₂ Equivalent³	The universal unit for comparing emissions of different GHGs expressed in terms of the GWP of one unit of carbon dioxide. The quantity of a given GHG multiplied by its total global warming potential. This is the standard unit for comparing emissions of different GHGs.
Cracking¹	The process of breaking down larger molecules into smaller molecules, utilizing catalysts and/or elevated temperatures and pressures.
Cradle to Cradle Design	A system of thinking based on the belief that human design can approach the effectiveness and elegance of natural systems by learning from nature and incorporating its patterns. The ideal cradle-to-cradle packaging product is designed so that all of its materials safely cycle within either a biological or technical metabolism and are reused or recovered at their highest possible value.
Criteria Air Pollutant²	An air pollutant for which acceptable levels of exposure can be determined and for which an ambient air quality standard has been set. Examples include: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and PM10 and PM2.5. The term "criteria air pollutants" derives from the requirement that the U.S. EPA must describe the characteristics and potential health and welfare effects of these pollutants. The U.S. EPA and CARB periodically review new scientific data and may propose revisions to the standards as a result.
Criteria Pollutants²	U.S. EPA has identified six "criteria pollutants," ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate matter, and lead as indicators of air quality, and for each is an established maximum concentration above which adverse effects on human health may occur.
Crude Oil¹	A mixture of hydrocarbons that exists in the liquid phase and that is found in natural underground reservoirs.
Data Quantification³	The system used by the Registry to rank emissions quantification methodologies according to their levels of accuracy. "Tier A" designates the preferred, or most accurate, approach, "Tier B" represents an alternative second-best approach, and "Tier C" represents the least accurate, but still acceptable approach.
Datum³	A reference or starting point.
Daylight Factor	Computed by dividing the amount of indoor illuminance at a point on a workplane by the outdoor illuminance under overcast conditions.
Deforestation²	Those practices or processes that result in the change of forested lands to non-forest uses. This is often cited as one of the major causes of the enhanced greenhouse effect for two reasons: 1) the burning or decomposition of the wood releases carbon dioxide; and 2) trees that once removed carbon dioxide from the atmosphere in the process of photosynthesis are no longer present and contribution to carbon storage.

Terminology	
Term	Definition
CO₂ Equivalent³	The universal unit for comparing emissions of different GHGs expressed in terms of the GWP of one unit of carbon dioxide. The quantity of a given GHG multiplied by its total global warming potential. This is the standard unit for comparing emissions of different GHGs.
De-Inking	Removal of ink and other materials from printed papers. Principal operations are flotation, washing, centrifugal cleaning, and dispersion. De-inking is the key to producing highly recyclable material (high or low grades).
De Minimis¹	Those emissions reported for a source or sources that are calculated using alternative methods selected by the operator, subject to the limits specified in section 95103 (a) (6) of AB 32.
Diesel Fuel¹	A fuel composed of distillates obtained in petroleum refining operations.
Direct Emissions¹	Greenhouse gas emissions from sources that are under the operational control of the operator.
Direct Emissions³	Emissions from sources within the reporting entity's organizational boundaries that are owned or controlled by the reporting entity, including stationary combustion emissions, mobile combustion emissions, process emissions, and fugitive emissions.
Discrete Early Action²	Greenhouse gas reduction measures enforceable by January 1, 2010.
Distillate Fuel Oil^{1,2}	A general classification for a petroleum fraction produced in conventional distillation operations. It includes diesel fuels and fuel oils.
Distributed Emissions¹	CO ₂ emissions from fuel combustion at cogeneration facilities distributed between energy stream outputs including thermal energy, electricity generation, and potentially other product outputs.
District Heating and Cooling¹	The distribution of heat or cooling from one or more sources to multiple buildings.
Double-counting⁴	When a CO ₂ emissions reduction credit is counted more than once toward meeting reduction goals.
Dow Jones Sustainability Index	Launched in 1999, the Dow Jones Sustainability Index provides a financial quantification of member companies' sustainability strategy and their management of sustainability opportunities risks and costs. Intended to assist in integrating economic, environmental and social factors in their business strategies.
Early Action²	Greenhouse gas reduction measures to be initiated by ARB in the 2007-2012 timeframe. These measures may be regulatory or non-regulatory.
Eco-efficiency	To do more with less resources.

Terminology	
Term	Definition
Ecological Footprint	A tool for determining if our lifestyles are sustainable. Categories of human consumption translate into areas of productive land required to provide resources and assimilate waste products. The “footprint” is total amount of land required for food, housing, transport, consumer goods, and services. This approach shows that the most advanced countries consume and have a larger footprint on the earth than the rest of the planet.
Effluent	Outflow of waste or water from a treatment facility and the outflow of sewage from a sewer system.
Electricity Transaction¹	The purchase, sale, import, export or exchange of electric power.
Embodied Energy	The total amount of energy involved in the entire production of a product, from the point it is extracted until the current state.
Emerging Conflict of Interest³	A potential or actual conflict of interest (COI) situation that arises, or becomes known, during verification or for a period of one year after the completion of verification activities.
Emissions^{1,2}	The release of greenhouse gases into the atmosphere from sources and processes in a facility.
Emissions Data Report	The reports prepared by an operator each year and submitted by electronic means to ARB that provides the information required by this article.
Emission Factor³	GHG emissions expressed on a per unit activity basis (for example, metric tons of CO ₂ emitted per million Btus of coal combusted, or metric tons of CO ₂ emitted per kWh of electricity consumed).
Emission Factor¹	A unique value for determining an amount of a greenhouse gas emitted for a given quantity of activity (e.g., metric tonnes of carbon dioxide emitted per barrel of fossil fuel burned).
Emission Factor²	A coefficient that quantifies the emissions or removals of a gas per unit activity. Emission factors are often based on a sample of measurement data, averaged to develop a representative rate of emission for a given activity level under a given set of operating conditions.
Emission Inventory²	An estimate of the amount of pollutants emitted into the atmosphere from major mobile, stationary, area-wide and natural source categories over a specific period of time such as a day or a year.
Emission Rate²	The weight of a pollutant emitted per unit of time (e.g., tons/year).
Emissions Reduction Unit (ERU)⁴	A tradable unit, equivalent to one metric tonne of CO ₂ emissions reductions that is generated by Joint Implementation (JI) (linkable to glossary) projects.
Energy Star	International standard for energy-efficiency for electronic products. Products that comply with the Energy Star standards have been approved for their concern for the environment. When buying a product with an Energy Star seal, one can save money on electric bills, as well as reduce greenhouse gas emissions.

Terminology	
Term	Definition
Energy Policy Act (APACT)	Under the 1992 law, some of the most common and least efficient lamps (light bulbs and fluorescent tubes) cannot be made or imported into the U.S. The market has an ample supply of highly efficient substitutes.
Entity^{1,3}	A person, firm, association, organization, partnership, business trust, corporation, limited liability corporation, company, or government agency. Any business, corporation, institution, organization, government agency, etc., recognized under U.S., Canadian, or Mexican law. A reporting entity is comprised of all the facilities and emission sources delimited by the organizational boundary developed by the entity, taken in their entirety.
Environmental Dynamic Revenue Assessment Model (E-DRAM)²	A dynamic general equilibrium forecasting model that simulates the way that changes in energy investment, price, and use affect how Californians live their lives.
Energy 2020²	An economy-wide energy use model that predicts the investment behavior of both energy suppliers and consumers.
Economic and Technology Advancement Advisory Committee (ETAAC)²	A committee which advises ARB on activities that will facilitate investment in and implementation of technological research and development opportunities including, but not limited to, identifying new technologies, research, demonstration projects, funding opportunities, developing state, national, and international partnerships and technology transfer opportunities, and identifying and assessing research and advanced technology investment and incentive opportunities that will assist in the reduction of GHG emissions.
Environmental Justice Advisory Committee (EJAC)²	A committee created by AB ₃₂ whose mission is to advise ARB in developing the Scoping Plan and any other pertinent matter in implementing AB ₃₂ .
Equipment¹	Any stationary article, machine, or other contrivance, or combination thereof, which may cause the issuance or control the issuance of air contaminants; equipment shall not mean portable equipment, tactical support equipment, or generating units designated as backup or emergency generators in a permit issued by an air pollution control district or air quality management district.
Equity Share Approach³	An emissions accounting approach for defining organizational boundaries in which an entity accounts for GHG emissions from each operation according to its share of economic interest in the operation, which is the extent of rights an entity has to the risks and rewards flowing from an operation.
Estimation²	The assessment of the value of an immeasurable quantity using available data and knowledge within stated computational formulas/mathematical models.
Ethane¹	A normally gaseous straight-chained hydrocarbon that boils at a temperature of -127.48 degrees Fahrenheit, with a chemical formula of C ₂ H ₆ .

Terminology

Term	Definition
Executive Officer ¹	The Executive Officer of the ARB or his or her delegate.
Facility ^{1,3}	<p>Any property, plant, building, structure, stationary source, stationary equipment or grouping of stationary equipment or stationary sources located on one or more contiguous or adjacent properties, in actual physical contact or separated solely by a public roadway or other public right-of way, and under common operational control, that emits or may emit any greenhouse gas. Operators of military installations may classify such installations as more than a single facility based on distinct and independent functional groupings within contiguous military properties.</p> <p>Any installation or establishment located on a single site or on contiguous or adjacent sites that are owned or operated by an entity. A facility includes not only all of the stationary installations and equipment located at the site, but all mobile equipment that is under the control of the reporting entity and operates exclusively on a particular facility's premises. Examples of such site-specific mobile equipment include forklifts, front-end loaders, off-road trucks, mobile cranes, etc. Similarly, pipelines, pipeline systems, and electricity transmission and distribution systems are considered discrete facilities for reporting purposes.</p>
Feed ¹	The prepared and mixed materials, which include but are not limited to materials such as limestone, clay, shale, sand, iron ore, mill scale, cement kiln dust, and fly ash, that are fed to the kiln. Feed does not include these fuels used in the kiln to produce heat to form the clinker product.
Feedstock ¹	The raw material supplied to a process.
Final Point of Delivery ¹	The last point of delivery for a given electricity transaction.
Finance Lease ³	Same as Capital Lease.
Financial Control ³	The ability to direct the financial and operating policies of an operation with an interest in gaining economic benefits from its activities. Financial control is one of two ways to define the control approach.
Flare ¹	A combustion device that uses an open flame to burn combustible gases with combustion air provided by uncontrolled ambient air around a flame. This term includes both ground-level and elevated flares. When used as a verb, the term "flare" means to combust vent gas in a flare.

Terminology

Term	Definition
Flexicoking¹	A thermal cracking process, which converts heavy hydrocarbons such as crude oil, tar sands bitumen, and distillation residues into light hydrocarbons.
Flexigas¹	A low Btu gas produced during flexicoking.
Fluid Catalytic Cracking Unit¹	A process unit in a refinery in which petroleum derivative feedstock is charged and fractured into smaller molecules in the presence of a catalyst, or reacts with a contact material to improve feedstock quality for additional processing and in which the catalyst or contact material is regenerated by burning off coke and other deposits. The unit includes, but is not limited to, the riser, reactor, regenerator, air blowers, spent catalyst, and all equipment for controlling air pollutant emissions and recovering heat.
Fluid Catalytic Cracking Unit Regenerator¹	The portion of the fluid catalytic cracking unit in which coke burn-off and catalyst regenerations occurs, and includes the regenerator combustion air blower(s).
Fluid Coking¹	A thermal cracking process utilizing fluidized-solids technique to remove carbon (coke) for continuous conversion of heavy, low-grade oils into lighter products.
Fluorocarbons²	Carbon-fluorine compounds that often contain other elements such as hydrogen, chlorine or bromine. Common fluorocarbons include chlorofluorocarbon (CFCs), hydrochlorofluorocarbons (HCFCs), hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs).
Flux²	(1) Raw materials, such as limestone, dolomite, lime and silica sand, which are used to reduce the heat or other energy requirements of thermal processing of minerals (such as the smelting of metals). Fluxes also may serve a dual function as a slagging agent. (2) The rate of flow of any liquid or gas, across a given area; the amount of this crossing a given area in a given time. (e.g., "Flux of CO ₂ absorbed by forests").
Fly Ash¹	Particles of ash, such as particulate matter that may also have metals attached to them, which are carried up the stack of a combustion unit with gases during combustion.
Forest Stewardship Council (FSC)	An international organization that bring people together to find solutions, which promote responsible stewardship of the world's forests.
Fossil Fuel	A deposit of hydrocarbon such as petroleum, coal or natural gas derived from living matter of a previous geologic time. These materials are burned by industry, automobiles, and other consumers to produce energy.
Fossil Fuel¹	A fuel, such as coal, oil and natural gas, produced by the decomposition of ancient (fossilized) plants and animals.
Fossil Fuel²	Geologic deposits of hydrocarbons from ancient biological origin, such as coal, petroleum and natural gas.

Terminology

Term	Definition
FSC Chain-of-Custody (CoC)	Certification assures consumers and forest product companies that the wood they purchase is sourced from certified forests. If a business is involved in the production or delivery of certified products, it must hold a Forest Stewardship Council (FSC) CoC certificate in order to make claims about the FSC content in its products.
Fuel¹	Solid, liquid, or gaseous combustible material.
Fuel Analytical Data¹	Any data collected about the mass, volume, flow rate, heat content, or carbon content of a fuel.
Fuel Combustion²	The intentional oxidation of materials with an apparatus that is designed to provide heat or mechanical work to a process, or for use away from the apparatus.
Fugitive Emissions¹	The unintended or incidental emissions of greenhouse gases from the transmission, processing, storage, use, or transportation of fossil fuels or other materials, including but not limited to HFCs from refrigeration leaks, SF ₆ from electric power distribution equipment, methane from mined coal, and CO ₂ emitted from geyser stream and/or fluid used in geothermal generating facilities.
Fugitive Emissions²	Emissions that are not emitted through an intentional release through stack or vent. This can include leaks from industrial plant and pipelines.
Fugitive Emissions³	Intentional and unintentional releases of GHGs from joints, seals, gaskets, etc. Uncontrolled emissions including emissions from the production, processing, transmission, storage, and use of fuels and other substances, not emitted through an exhaust pipe, stack, chimney, vent or other functionally equivalent opening. Examples include releases of sulfur hexafluoride (SF ₆) from electrical equipment, hydrofluorocarbon (HFC) releases during the use of refrigeration and air conditioning equipment, process equipment leaks, etc.
Fugitive Source¹	A source of fugitive emissions.
Full Verification¹	All verification services as provided in section 95131 of AB 32.
General Stationary Combustion Facility¹	A facility not otherwise subject to sector-specific reporting requirements that emits ≥ 25,000 metric tonnes of CO ₂ in 2008 or any subsequent year from stationary combustion sources.
Generating Facility¹	A facility that generates electricity and includes one or more generating units at the same location.
Generating Unit¹	Any combination of physically connected generator(s), reactor(s), boiler(s), combustion turbine(s), or other prime mover(s) operated together to produce electric power.

Terminology	
Term	Definition
Geologic Carbon Sequestration²	The process of injecting CO ₂ from a source, such as coal-fired electric generating power plant, through a well into the deep subsurface. With proper site selection and management, geologic sequestration could play a major role in reducing emissions of CO ₂ . Research efforts to evaluate the technical aspects of CO ₂ geologic sequestration are underway.
Global Warming¹	The increase in the average temperature of the Earth's surface, air and oceans. The global average air temperature near the Earth's surface rose approximately 0.74 degrees Celsius (1.33 Fahrenheit) during the 100 year period ending in 2005.
Global Warming²	An average increase in the temperature of the atmosphere near the Earth's surface and in the troposphere, which can contribute to changes in global climate patterns. Global warming can occur from a variety of causes, both natural and human induced. In common usage, "global warming" often refers to the warming that can occur as a result of increased emissions of greenhouse gases from human activities.
Global Warming Potential²	The index used to translate the level of emissions of various gases into a common measure in order to compare the relative radiative forcing of different gases without directly calculating the changes in atmospheric concentrations. GWPs are calculated as the ratio of the radiative forcing that would result from the emissions of one kilogram of a greenhouse gas to that from emission of one kilogram of carbon dioxide over a period of time (usually 100 years).
Global Warming Potential³	The ratio of radiative forcing (degree of warming to the atmosphere) that would result from the emissions of one unit of a given GHG to one unit of CO ₂ .
Global Warming Potential Factor (GWP Factor)¹	The radiative forcing impact of one mass-based unit of a given greenhouse gas relative to an equivalent unit of carbon dioxide over a given period of time.
Global Warming Solutions Act of 2006 (AB 32)²	AB 32 requires the California Air Resources Board (CARB) to develop regulations and market mechanisms that will ultimately reduce California's GHG emissions by 25% by 2020. Specifically, AB 32 requires CARB to: establish a statewide GHG emissions cap for 2020 based on 1990 emissions by January 1, 2008; adopt mandatory reporting rules for significant sources of GHGs by January 1, 2009; adopt a scoping plan by January 1, 2009 indicating how emission reductions will be achieved from significant GHG sources via regulations, market mechanisms and other actions; adopt regulations by January 1, 2011 to achieve the maximum technologically feasible and cost-effective reductions in GHGs; and convene an Environmental Justice Advisory Committee, and an Economic and Technology Advancement Advisory Committee to advise CARB.
Gold Standard⁴	A widely endorsed quality standard for designing and implementing carbon offset projects. The Gold Standard's main purpose is to ensure that CDM projects are both reducing carbon dioxide emissions and fostering sustainable development.

Terminology

Term	Definition
Green Roofs	Ecological roof gardens that involve planted areas, specialized soil substitutes, and little or no reengineering on the existing roof. Green roofs improve the building's thermal insulation, absorb less heat, produce oxygen, absorb carbon dioxide, filter air pollution, provide wildlife habitat, and absorb up to 75% of rain falling on it, thus slowing storm water runoff.
Greenhouse Effect²	Trapping and build-up of heat in the atmosphere (troposphere) near the earth's surface. Some of the heat flowing back toward space from the earth's surface is absorbed by water vapor, carbon dioxide, ozone, and several other gases in the atmosphere and then reradiated back toward the earth's surface. If the atmospheric concentrations of these greenhouse gases rise, the average temperature of the lower atmosphere will gradually increase.
Greenhouse Gas (GHG)¹	Carbon dioxide (CO ₂), methane (CH ₄), nitrous oxide (N ₂ O), sulfur hexafluoride (SF ₆), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs).
Greenhouse Gases (GHGs)^{2,3,4}	Those gases capable of absorbing radiation emitted from the Earth. Although greenhouse gases make up only about 1 percent of the Earth's atmosphere, they regulate our climate by trapping heat and holding it in a kind of warm-air blanket that surrounds the planet. They affect the Earth's climate and changes in their concentrations contribute to climate change. The main greenhouse gases that contribute to climate change are water vapor, carbon dioxide, methane, nitrous oxide and chlorofluorocarbons. Those named in the Kyoto Protocol include carbon dioxide (CO ₂), methane (CH ₄), nitrous oxide (N ₂ O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF ₆). The EU-ETS covers only CO ₂ emissions, but CDM and JI projects can address any of these six gases.
Greenhouse Gas Emission³	Total mass of a GHG released to the atmosphere over a specified period of time.
Greenhouse Gas Information System³	Policies, processes and procedures to establish, manage and maintain GHG information.
Greenhouse Gas	Any physical unit, process, or other use or activity that releases a greenhouse gas into the atmosphere.
Greenwash	"The act of misleading consumers regarding the environmental practice of a company or the environmental benefits of a product or service", coined by environmental marketing company TerraChoice.
Grey Water Systems	A form of recycling by collecting rain water or water coming from all interior sources except toilets. This water is not considered contaminated and can be used for landscape irrigation. Ideal for plants and irrigation, but many restrictions are placed on the use of grey water systems.

Terminology	
Term	Definition
Gross Domestic Product (GDP)²	The sum of gross value added, at purchaser's prices, by all resident and non-resident producers in the economy, plus any taxes and minus any subsidies not included in the value of the products in a country or a geographic region for a given period, normally one year. It is calculated without deducting for depreciation of fabricated assets or depletion and degradation of natural resources.
Gross Generation¹	The total electrical output of the generating unit, expressed in megawatt hours (MWh) per year.
Halocarbons²	A collective term for the group of partially halogenated organic species, including the chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), hydrofluorocarbons (HFCs), halons, methyl chloride, methyl bromide, etc. Many of the halocarbons have large Global Warming Potentials. The chlorine and bromine-containing halocarbons are also involved in the depletion of the ozone layer.
High Emissivity Roofing	Roofing that uses materials that reflect solar radiant energy. This helps curb excess heat gain into the building requiring less energy for cooling.
High Heat Value (HHV)¹	The high or gross heat content of the fuel with the heat of vaporization included. The water vapor is assumed to be in a liquid state.
Hydrocarbons¹	Chemical compounds containing predominantly carbon and hydrogen.
Hydrocarbons²	Strictly defined as molecules containing only hydrogen and carbon. The term is often used more broadly to include any molecules in petroleum which also contains molecules with S, N, or O. An unsaturated hydrocarbon is any hydrocarbon containing olefinic or aromatic structures.
Hydrofluorocarbons (HFCs)²	Compounds containing only hydrogen, fluorine, and carbon atoms. They were introduced as alternatives to ozone depleting substances in serving many industrial, commercial, and personal needs. HFCs are emitted as by-products of industrial processes and are also used in manufacturing. They do not significantly deplete the stratospheric ozone layer, but they are powerful GHGs with global warming potentials ranging from 140 (HFC-152a) to 11,700 (HFC-23).
Hydrofluorocarbons (HFCs)^{1,3}	A group of manmade chemicals with various commercial uses (e.g., refrigerants) composed of one or two carbon atoms and varying numbers of hydrogen and fluorine atoms. Most HFCs are highly potent GHGs with 100-year GWPs in the thousands. A class of GHGs primarily used as refrigerants, consisting of hydrogen, fluorine, and carbon.
Hydrogen¹	The lightest of all gases, occurring chiefly in combination with oxygen in water; exists also in acids, bases, alcohols, petroleum, and other hydrocarbons.

Terminology	
Term	Definition
Hydrogen Plant (Hydrogen Production Facility)¹	A facility that produces hydrogen with steam hydrocarbon reforming, partial oxidation of hydrocarbons, or other processes.
Illuminating Engineering Society of North America (IESNA)	A professional organization and is a technical authority in illumination.
Impervious	A solid that does not allow a liquid to pass through its surface; impenetrable. In this context it refers to the ability of rainwater to pass through unnatural surfaces around and near a building or the building's parking lot.
Indirect Emissions³	Emissions that are a consequence of activities that take place within the organizational boundaries of the reporting entity, but that occur at sources owned or controlled by another entity. For example, emissions of electricity used by a manufacturing entity that occur at a power plant represent the manufacturer's indirect emissions.
Indirect Energy¹	Electricity, thermal, or other energy sources provided by a retail provider or facility not owned or operated by the user of the energy.
Indoor Environmental Quality (IEQ)	Encompasses all aspects of the indoor setting including air quality, ventilation, thermal comfort, lighting, and noise.
Inherent Uncertainty³	The scientific uncertainty associated with measuring GHG emissions due to limitations on monitoring equipment, or measurement methodologies.
Insourcing³	The administration of ancillary business activities, formally performed outside of the company, using resources within the company.
Inter-governmental Panel on Climate Change (IPCC)²	Established jointly by the United Nations Environment Program and the World Meteorological Organization in 1988 for the purpose of assessing information in the scientific and technical literature related to all significant components of the issue of climate change.
Inter-governmental Panel on Climate Change (IPCC)³	The IPCC was established to provide the decision-makers and others interested in climate change with an objective source of information about climate change. The IPCC does not conduct any research nor does it monitor climate related data or parameters. Its role is to assess on a comprehensive, objective, open and transparent basis the latest scientific, technical and socio-economic literature produced worldwide relevant to the understanding of the risk of human-induced climate change, its observed and projected impacts and options for adaptation and mitigation (Note: This group is sometimes incorrectly referred to as the International Panel on Climate Change).
Internal Peer Reviewer³	Competent Lead Verifier, independent of the planning and performance of the verification, with responsibility for reviewing the verification evidence and work papers and concurring with the conclusions and opinion arrived at by the client's Lead Verifier.

Terminology	
Term	Definition
International Accreditation Forum (IAF)³	IAF's primary role is to ensure that its Accreditation Body members only accredit bodies that are competent to do the work they undertake and are not subject to conflicts of interest. Its second purpose is to establish mutual recognition arrangements, known as Multilateral Recognition Arrangements (MLA), between its members which reduced risk to business and its customers by ensuring that an accredited certificate may be relied upon anywhere in the world. The objective of a MLA is that it will cover all Accreditation Bodies in all countries in the world, thus eliminating the need for suppliers of products or services to be certified in each country where they sell their products or services. Certified once - accepted everywhere. Note: there are currently no MLAs related to GHG verification.
Inventory³	A comprehensive, quantified list of an organization's GHG emissions and sources.
Inventory Boundary³	An imaginary line that encompasses the direct and indirect emissions included in the inventory. It results from the chosen organizational and operational boundaries.
Investor Owned Utilities (IOUs)⁴	A private company that provides a utility, such as water, natural gas or electricity, to a specific service area.
ISO 14065: 2007³	International standard on Greenhouse Gases - Requirements for greenhouse gas validation and Verification Bodies for use in accreditation or other forms of recognition.
ISO 14064-1: 2007³	International Standard on Greenhouse Gases - Part 1: Specification with guidance at the organizational level for the quantification and reporting of greenhouse gas emissions and removals.
ISO 14064-2: 2007³	International Standard on Greenhouse Gases - Part 2: Specification with guidance at the project level for the quantification, monitoring and reporting of greenhouse gas emissions reductions and removal enhancements.
ISO 14064-3: 2007³	International Standard on Greenhouse Gases - Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions.
ISO 17011:2004³	International Standard on Conformity Assessment - General requirements for Accreditation Bodies accrediting conformity assessment bodies.
ISO 9001:2000³	International Standard on Quality Management Systems - Requirements.
Joint Implementation Project⁴	Mechanism for transfer of emissions permits between Annex B countries. Joint Implementation (JI) projects generate Emission Reduction Units (ERUs) and are approved by and the ERUs are issued by individual governments in which the projects take place and reduce the quantity of AAUs available to the country.
Kerosene¹	A light distillate fuel that includes No. 1-K and No. 2-K as well as other grades of range or stove oil that have properties similar to those of No. 1 fuel oil.

Terminology	
Term	Definition
Kiln¹	A device, including any associated preheater or precalciner devices, that produce clinker by heating limestone and other materials for subsequent production of Portland or other cement.
Kilowatt hour (kWh)¹	The electrical energy unit of measure equal to one thousand watts of power supplied to, or taken from an electric circuit steadily for one hour. (A watt is a unit of electrical power equal to one ampere under pressure of one volt, or 1/746 horsepower).
Kyoto Gases²	Carbon dioxide (CO ₂), nitrous oxide (N ₂ O), methane (CH ₄), sulfur hexafluoride (SF ₆), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs).
Kyoto Protocol^{2,4}	A protocol to the United Nations Framework Convention on Climate Change. It was agreed to on December 11, 1997 and entered into force on February 16, 2005. As of November 2007, 174 parties had ratified the protocol, including 36 developed countries plus the EU (a party in its own right) and agreed to reduce the level of emissions of greenhouse gases that cause climate change to the levels stipulated in Annex 1 of the protocol. hundred thirty seven developing countries have ratified the protocol, including Brazil, China and India but they have no obligation beyond monitoring and reporting emissions. The Protocol shares the objective and institutions of the Convention. The major distinction between the two, however, is that while the Convention encouraged developed countries to stabilize GHG emissions, the Protocol commits them to do so. The detailed rules for its implementation were adopted in Marrakesh in 2001, and are called the "Marrakesh Accords."
Land Use and Land Use Change²	The total of arrangements, activities, and inputs undertaken in a certain land cover type (a set of human actions). The term land use is also used in the sense of the social and economic purposes for which land is managed (e.g., grazing, timber extraction and conservation). Land use change refers to a change in the use or management of land by humans, which may lead to a change in land cover. Land cover and land use change may have an impact on the surface albedo, evapotranspiration, sources and sinks of GHGs, or other properties of the climate system and may thus have a radiative forcing and/or other impacts on climate, locally or globally.
Lead Verifier¹	A person that has met all of the requirements in section 95132(b)(2) and who may act as the lead verifier of a verification team providing verification services or as a lead verifier providing an independent review of verification services rendered.
Lead Verifier³	An employee of a Verification Body that is accredited by the Registry to lead a verification team. Competent and independent person with responsibility for planning the verification process and leading and managing the verification team in performing and reporting the verification process.
Leadership in Energy and Environmental Design (LEED)	A voluntary, consensus-based national standard for developing high-performance, sustainable buildings.

Terminology

Term	Definition
Leakage²	A reduction in emissions of greenhouse gases within California that is offset by an increase in emissions of greenhouse gases outside the state.
Leakage⁴	The extent to which events occurring outside the project boundary tend to reduce a project's carbon dioxide emissions benefit. For example, avoiding deforestation in one place might lead to acceleration in deforestation in some other place. This can apply to all types of carbon dioxide reduction projects.
Less Intensive Verification¹	The verification services provided in interim years between full verifications; less intensive verification only requires data checks on an operator's emissions data report based on the most current sampling plan developed as part of the most current full verification services.
Level of Assurance³	The degree of assurance the intended user required in verification. Note: the level of assurance is used to determine the depth of detail that a material offers, omissions, or misrepresentations.
Life Cycle Analysis (LCA)	The key measurement tool for environmental sustainability. LCA is a technique for assessing the environmental impacts associated with a product (or service), covering all stages in a product's life.
Limited Assurance³	The Verifier providing a limited level of assurance will place less emphasis on detailed testing of GHG data and information supplied to support the GHG assertion. In addition, there may be some other "limitation" placed upon the work of the Verifier (for example the freedom of selection of facilities to inspect). It is important that the basis of the Verification Statement is clear to the intended user such that there is no confusion as to the level of work undertaken and the type of Verification Statement being expressed. The Verification Statement resulting from work undertaken to a limited level of assurance is written in a "negative" format, for example - "Based on the processes and procedures conducted, there is no evidence to suggest that the GHG assertion is not materially correct and is not a fair representation of the GHG data and information."
Liquefied Petroleum Gas (LPG)¹	A group of hydrocarbon-based gases derived from crude oil refining or natural gas fractionation. They include propane, propylene, normal butane, butane, butylene, isobutene and isobutylene. For convenience of transportation, these gases are liquefied through pressurization.
Long-term Power Contract¹	A power contract with a term of five years or more.
Low Btu Gas¹	Gases recovered from casing vents, vapor recovery systems, crude oil and petroleum product storage tanks and other parts of petroleum refining and the crude oil and natural gas production process.
Low-emitting Materials	Materials that do not release high amounts of volatile organic compounds.

Terminology

Term	Definition
Low Heating Value (LHV)¹	Low or net heat content with the heat of vaporization excluded. The water is assumed to be in the gaseous state.
Mark³	From the French "marque," meaning brand. More commonly a "trade name", "brand name" or logo that identifies a specific company or product. Commonly used by verification and certification bodies to identify or designate a system, process or product, etc. that is conformant to a specific set of requirements. ISO 17030 defines a Third Party mark of conformity as "a protected mark issued by a body performing third party conformity assessment...". A legally protected mark is one that is protected against unauthorized use. Proof of legal ownership of a mark for the purposes of accreditation would include, for example, evidence of the registration of the mark at a recognized trademark or patent office such as the U.S. Patent Office which issues a certification of registration.
Marketer¹	A purchasing/selling entity that is not a retail provider, and that is the purchaser/seller at the first point of delivery in California for electric power imported into California, or the last point of receipt in California for power exported from California.
Material Discrepancy³	Individual or the aggregate of actual errors, omissions and misrepresentations in the greenhouse gas assertion that could affect the decisions of the intended users.
Material Misstatement¹	One or more inaccuracies identified in the course of verification that result in the total reported emissions, or reported purchases, sales, imports or exports of electricity, being outside the 95 percent accuracy required to receive a positive verification opinion.
Materiality³	Concept that individual or the aggregation of errors, omissions and misrepresentations could affect the greenhouse gas assertion and could influence the intended users' decisions.
Measurement-Based³	Any of the various emission quantification methodologies that involve the determination of emissions by means of direct measurement of the flue gas flow, as well as the concentration of the relevant GHG(s) in the flue gas.
Medite	A composite building product manufactured from pre-consumer recycled wood.
Methane (CH₄)¹	A GHG consisting on the molecular level of a single carbon atom and four hydrogen atoms.
Methane (CH₄)²	A hydrocarbon that is a greenhouse gas with a global warming potential most recently estimated at 25 times that of carbon dioxide (CO ₂). Methane is produced through anaerobic (without oxygen) decomposition of waste in landfills, flooded rice fields, animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production, and incomplete fossil fuel combustion.
Metrics	Quantitative measurements.

Terminology	
Term	Definition
Metric Tonne (MT)¹	A common international measurement for the quantity of GHG emissions, equivalent to about 2204.6 pounds or 1.1 short tons.
Metric Ton²	The tonne {t} or metric ton, sometimes referred to as a metric tonne, is an international unit of mass. A metric ton is equal to a megagram (Mg), 1,000 kilograms, 2,204.6 pounds, or 1.1023 short tons.
Million Metric Tons (MMT)²	Common measurement used in GHG inventories. It is equal to a Tetragram (Tg).
Minimum Efficiency Reporting Value (MERV)	A rating of the effectiveness of air filters in removing particle contaminants from the air and is dependent upon the particle size.
Minimum Quality Standard³	Data that is free of material misstatements, and meets the Registry's minimum level of accuracy of at least 95 percent.
Mobile Combustion Emissions³	Emissions from the combustion of fuels in transportation sources (e.g., cars, trucks, buses, trains, airplanes, and marine vessels) and emissions from non-road equipment such as equipment used in construction, agriculture, and forestry. A piece of equipment that cannot move under its own power but that is transported from site to site (e.g., an emergency generator) is a stationary, not a mobile, combustion source.
Mobile Combustion Emissions¹	Emissions from the transportation of materials, products, waste, and employees resulting from the combustion of fuels in company owned controlled mobile combustion sources.
Mobile Combustion Source¹	A source of greenhouse gas emissions resulting from combustion by a vehicle or other non-stationary, self-propelled combustion source that produces greenhouse gas emissions including, but not limited to, passenger cars, large/heavy duty truck cabs and chassis, light and medium duty trucks and vans, motorcycles, public transit buses, or military tanks or other tracked military vehicles, mobile cranes, bulldozers, concrete mixers, street cleaners, golf carts, all terrain vehicles, trains, airplanes, boats, ships, implements of husbandry, and hauling equipment used inside and around airports, docks depots, industrial, and commercial plants.
Mobile Sources²	Sources of air pollution such as automobiles, motor-cycles, trucks, off-road vehicles, boats and airplanes.
Model²	A model is a quantitatively-based abstraction of a real-world situation which may simplify or neglect certain features to better focus on its more important elements.
Moisture Sensor Irrigation	An irrigation system that uses optimal water efficiency by measuring moisture levels throughout the site being irrigated. By measuring the moisture levels along the irrigation pipes, the sprinklers adjust so water is not wasted.
Monopack	Package that is made from same material for easy sorting and recycling. An aluminum can with a paper label is not a monopack.

Terminology	
Term	Definition
Montreal Climate Exchange (MCeX)	Began trading in May 2008: a joint venture between the Montreal Exchange and the Chicago Climate Exchange, the new exchange allow the trading of futures contracts on greenhouse gases.
Montreal Gases²	Ozone depleting substances covered by the Montreal Protocol, including chlorofluorocarbons, hydrochlorofluorocarbons, carbon tetrachloride, methyl chloroform, and brominated gases.
Motor Gasoline¹	A complex mixture of relatively volatile hydrocarbons with or without small quantities of additives, blended to form a fuel suitable for use in spark-ignition engines. Motor gasoline is characterized as having a boiling range of 122 to 158 degrees Fahrenheit at the 10-percent recovery point.
Multi-jurisdictional Retail Provider¹	A retail provider that provides electricity to end users in California and in one or more other states.
Municipal Solid Waste (MSW)²	Residential solid waste and some non-hazardous commercial, institutional, and industrial wastes. This material is generally sent to municipal landfills for disposal.
Nitrogen Oxides (NOx)²	Gases consisting of one molecule of nitrogen and varying numbers of oxygen molecules. Nitrogen oxides are produced in the emissions of vehicle exhausts and from power stations. In the atmosphere, nitrogen oxides can contribute to formation of photochemical ozone (smog), can impair visibility, and have health consequences; they are thus considered pollutants.
Nitrous Oxide (N₂O)^{1,2}	A GHG consisting on the molecular level of two nitrogen atoms and a single oxygen atom. A powerful greenhouse gas with a global warming potential of 298 times that of carbon dioxide (CO ₂). Major sources of nitrous oxide include soil cultivation practices, especially the use of commercial and organic fertilizers, manure management, fossil fuel combustion, nitric acid production, and biomass burning.
No. 1 Diesel Fuel¹	A light distillate fuel oil that meets the specifications of ASTM (American Society for Testing and Materials) Specification D 396-07.
No. 1 Distillate¹	A petroleum distillate that can be used as either a diesel fuel or a fuel oil.
No. 1 Fuel Oil¹	A light petroleum distillate fuel oil that meets the specifications of ASTM Specification D 396-07.
No. 2 Diesel Fuel¹	A distillate fuel oil that meets the specifications of ASTM Specification D 975-07b.
No. 2 Distillate¹	A petroleum distillate that can be used as either a diesel fuel or a fuel oil.
No. 2 Fuel Oil (heating oil)¹	A distillate fuel oil that meets the specifications of ASTM Specification D396-07.
No. 4 Fuel Oil¹	A distillate fuel oil made by blending distillate fuel oil and residual fuel oil stocks that conform with ASTM Specification D 396-07.

Terminology	
Term	Definition
Non-Annex 1 Countries⁴	Non-Annex 1 Countries are mostly developing countries. Certain groups of developing countries are recognized by the Convention as being especially vulnerable to the adverse impacts of climate change, including countries with low-lying coastal areas and those prone to desertification and drought. Others (such as countries that rely heavily on income from fossil fuel production and commerce) feel more vulnerable to the potential economic impacts of climate change response measures. The Convention emphasizes activities that promise to answer the special needs and concerns of these vulnerable countries, such as investment, insurance and technology transfer.
Non-point Source Pollution	Pollution which does not come from a direct source, but rather comes from many sources. Non-point pollution includes run-off from parking lots, streets, lawns, roofs, or any other impervious surface. Non-point pollution also includes fertilizer or pesticide run-off from lawn or garden maintenance.
Non-conformance¹	The failure to use the method or emission factors specified in this article to calculate emissions, or the failure to meet other requirements of the regulation.
North American Industry Classification System (NAICS)¹	A standard for use by Federal statistical agencies in classifying business establishments for the collection, analysis, and publication of statistical data related to the business economy of the United States.
Null Power¹	Any electricity produced by a renewable energy generating facility from which a Western Renewable Energy Generation Information System (WREGIS) or a Nevada Tracks Renewable Energy Credits (NVTREC) certificate has been unbundled and sold separately.
Offsets^{2, 4}	A concept whereby emissions from proposed new or modified stationary sources are balanced by reductions from existing sources to stabilize total emissions. An offset is an action taken directly, outside of normal operations that result in reduced GHG emissions or removal of GHGs from the atmosphere.
Open-grid Pavement	Pavement that is pervious to water. It consists of a thin open-graded asphalt mix over the top of course ground stone aggregate. Water is able to pass through the asphalt surface and is stored in the aggregate until it is able to percolate deeper into the soil.
Operating Lease³	A lease which does not transfer the risks and rewards of ownership to the lessee and is not recorded as an asset in the balance sheet of the lessee. Leases other than operating leases are capital, finance, or financial leases.
Operational Boundaries³	The boundaries that determine the direct and indirect emissions associated with operations within the Reporter's organizational boundaries.

Terminology	
Term	Definition
Operational Control ^{1, 3}	<p>The authority to introduce and implement operating, environmental, health, and safety policies. In any circumstance where this authority is shared among multiple entities, the entity holding the permit to operate from the local air pollution control district or air quality management district is considered to have operational control for purposes of this article.</p> <p>Full authority to introduce and implement operating policies at an operation. Operational control is one of two ways to define the control approach.</p>
Operator ¹	The entity having operations control of a facility, or other entity from which an emissions data report is required under this article. For purposes of reporting electricity transactions as required in section 95111, "operator" means a retail provider, marketer, or facility operator.
Organic Growth (or Decline) ³	Increases or decreases in GHG emissions as a result of changes in production output, product mix, plant closures, and the opening of new plants.
Organization ³	Company, corporation, firm, enterprise, authority or institution, or part or combination thereof, whether incorporated or not, public or private, that has its own functions and administration.
Organizational Boundaries ³	The boundaries that determine the operations owned or controlled by the reporting entity, depending on the consolidation approach taken (either the equity share or control approach).
Outsourcing ³	The contracting out of activities to other businesses.
Ozone	A molecule with three oxygen atoms. It has adverse environmental effects at low altitudes as the substance commonly known as smog. It has positive environmental effects at higher altitudes as it creates the ozone layer that protects the earth from harmful ultra violet radiation.
Ozone ²	Ozone, the triatomic form of oxygen (O ₃), is a gaseous atmospheric constituent. In the troposphere, it is created both naturally and by photochemical reactions involving gases resulting from human activities (smog). Tropospheric ozone acts as a greenhouse gas. In the stratosphere, it is created by the interaction between solar ultraviolet radiation and molecular oxygen (O ₂). Stratospheric ozone plays a dominant role in the stratospheric radiative balance. Its concentration is highest in the ozone layer.
Ozone Depleting Substance (ODS) ²	A compound that contributes to stratospheric ozone depletion. These substances include chlorofluorocarbons, hydrochlorofluorocarbons, halons, methyl bromide, carbon tetrachloride, and methyl chloroform.
Pacific Northwest (PNW) ¹	Washington, Oregon, Idaho, Montana and British Columbia.

Terminology

Term	Definition
Passive System	Reference to passive radon-resistant construction features. Basic radon-resistant building techniques include having a gas-permeable layer below the foundation or flooring system, with plastic sheeting placed on top and a vent pipe that runs from the gas-permeable layer to the roof of the building, allowing the air to be vented outside. A class of greenhouse gases consisting on the molecular level of carbon and fluorine.
Perfluorocarbons	A class of greenhouse gases consisting on the molecular level of carbon and fluorine.
Perfluorocarbons (PFCs)²	A group of human-made chemicals composed of carbon and fluorine only. These chemicals (predominantly CF ₄ and C ₂ F ₆) were introduced as alternatives, along with hydrofluorocarbons, to the ozone depleting substances. In addition, PFCs are emitted as by-products of industrial processes and are also used in manufacturing. PFCs do not harm the stratospheric ozone layer, but they are powerful greenhouse gases: CF ₄ has a global warming potential (GWP) of 7,390 and C ₂ F ₆ has a GWP of 12,200.
Personal Conflict of Interest³	A relationship of an individual member of a verification team that may impair the objectivity of the member in performing verification activities.
Petroleum¹	Oil removed from the earth and the oil derived from tar sands, shale and coal.
Petroleum Coke¹	A residue high in carbon content and low in hydrogen that is the final product of thermal decomposition in the condensation process in cracking.
Petroleum Refinery¹	Any facility engaged in producing gasoline, aromatics, kerosene, distillate fuel oils, residual fuel oils, lubricants, asphalt, or other products through distillation of petroleum or through redistillation, cracking rearrangement, or reforming of unfinished petroleum derivatives.
Photosynthesis²	The process by which plants take CO ₂ from the air (or bicarbonate in water) to build carbohydrates, releasing oxygen in the process. There are several pathways of photosynthesis with different responses to atmospheric CO ₂ concentrations.
Pollution Sensitivity Zone	Groundwater aquifer which is more susceptible to pollution from run-off due to variation in geological structure.
Point of Delivery¹	A point on an electric system where a power supplier delivers electricity to the receiver of that energy. This point can be an interconnection with another system or a substation where the transmission provider's transmission and distribution systems are connected to another system.
Point of Receipt¹	A point on an electric system where an entity received electricity from a supplier. This point can be an inter-connection with another system or a generator busbar.

Terminology	
Term	Definition
Point Source ¹	Any separately identifiable stationary point from which greenhouse gases are emitted.
Point Sources ²	Specific points of origin where pollutants are emitted into the atmosphere such as factory smokestacks.
Point Source Pollution	Pollution which comes from direct sources, such as a pipe emitting effluent from a waste water treatment facility. Generally, point pollution includes all pollution from which a direct source can be recognized.
Polyactic Acid (PLA)	Material made from corn-starch, with a look and feel of petroleum-based plastic. PLA is one of the most commonly used bioplastics for making products.
Portland Cement ¹	Hydraulic cement (cement that not only hardens by reacting with water but also forms a water-resistant product) produced by pulverizing clinkers consisting essentially of hydraulic calcium silicates, usually containing one or more of the forms of calcium sulfate as an inter-ground addition.
Positive Verification Opinion ¹	A verification opinion rendered by a verification body stating that the verification body can say with reasonable assurance that the submitted emissions data report is free of material misstatement and includes a qualifying statement that the emissions data report conforms to the requirements of this article.
Power ¹	Electricity, except where the context makes clear that another meaning is intended.
Power Contract ¹	An arrangement for the purchase of electricity. Power contracts may be, but are not limited to, power purchase agreements and tariff provisions.
Pre-Consumer Waste	Paper or scraps left over from manufacturing, converting, or trimming in the mill or print house. It may also include unsold magazines and newspapers. Although the paper and scraps are being reused, this paper has never made the journey to the consumer and back again.
Pressure Swing Adsorption (PSA) ¹	A gas purification process, which selectively concentrates target gas molecules using porous, high surface area solid adsorbents and elevated pressure.
Primary Footprint ⁴	Direct carbon footprint that is essentially the result of three main factors: home energy use, transportation, and waste/trash.
Prime Mover ¹	The type of equipment such as an engine or water wheel that drives an electric generator. "Prime movers" include, but are not limited to, reciprocating engines, combustion or gas turbines, steam turbines, micro-turbines, and fuel cells.
Process ¹	Intentional or unintentional reactions between substances or their transformation, including, but not limited to, chemical or electrolytic reduction of metal ores, thermal decomposition of substances, and formation of substances for use as product or feedstock.

Terminology	
Term	Definition
Process Emissions¹	Greenhouse gas emissions other than combustion emissions occurring as a result of a process.
Process Emissions²	Emissions from industrial processes involving chemical transformations other than combustion.
Process Emissions³	Emissions resulting from physical or chemical processes rather than fuel combustion. Examples include emissions from manufacturing cement, aluminum, adipic acid, ammonia, etc.
Process Gas¹	Any gas generated by an industrial process such as petroleum refining.
Process Vent¹	An opening where a gas stream is continuously or periodically discharged during normal operation.
Professional Judgement¹	The ability to render sound decisions based on professional qualifications and relevant greenhouse gas accounting experience.
Propane¹	A normally straight chain hydrocarbon that boils at -43.67 degrees Fahrenheit and is represented by the chemical formula C ₃ H ₈ .
PSA Off-gas (tail gas)¹	The impurity stream resulting from the sequential PSA pressurization/depressurization purification process.
Public Owned Utilities (POUs)²	Non-profit utility provides owned by a community and operated by municipalities, counties, states, public power districts, or other public organizations.
Purchasing/Selling Entity¹	An entity that is eligible to purchase or sell energy or capacity and reserve transmission services.
Pure¹	Consisting of at least 97 percent by mass of a specified substance. For facilities burning biomass fuels, this means the fraction of biomass carbon is at least 97% of the total amount of carbon in the fuel burned at the facility.
Purge Gas¹	Nitrogen, carbon dioxide, liquefied petroleum gas, or natural gas used to maintain a non-explosive mixture of gases in a flare header or provide sufficient exit velocity to prevent regressive flame travel back in the flare header.
Qualifying Facility¹	A cogeneration or small power production facility that meets ownership, operating, and efficiency criteria established by the Federal Energy Regulatory Commission (FERC) pursuant to the Public Utility Regulatory Policies Act.
R-Value	The measurement of thermal resistance to heat flow. A higher R-value indicates greater insulating effectiveness. The type of material, its density and its thickness are all factors in determining R-value. Installing more insulation in a building helps the R-value increase.

Terminology	
Term	Definition
Radiative Forcing²	A change in the balance between incoming solar radiation and outgoing infrared (i.e., thermal) radiation. Without any radiative forcing, solar radiation coming to the Earth would continue to be approximately equal to the infrared radiation emitted from the Earth. The addition of GHGs to the atmosphere traps an increased fraction of the infrared radiation, reradiating it back toward the surface of the Earth and thereby creates a warming influence.
Reasonable Assurance¹	A high degree of confidence that submitted data and statements are valid.
Reasonable Assurance³	The Verifier provides a reasonable, but not absolute, level of assurance that the responsible party's GHG assertion is materially correct. The Verification Statement resulting from work undertaken to a reasonable level of assurance is written in a "positive" format, for example - "Based on the processes and procedures conducted, the GHG assertion is materially correct and is a fair representation of the GHG data and information."
Recyclable	Material that still has useful physical or chemical properties after serving its original purpose and can be reused or remanufactured to make new products.
Recycled¹	A material that is reused or reclaimed.
Recycled Paper	True recycled content papers are defined as papers containing a minimum of 30% post consumer fiber by weight.
Refinery Fuel Gas (still gas)¹	Gas generated at a petroleum refinery or any gas generated by a refinery process unit, and that is combusted separately or in any combination with any type of gas or used as a chemical feedstock.
Reforestation²	Planting of forests on lands that have previously contained forests but that have been converted to some other use.
Regeneration²	The act of renewing tree cover by establishing young trees, naturally or artificially - note: regeneration usually maintains the same forest type and is done promptly after the previous stand or forest was removed.
Registry⁴	Registries keep track of credit ownership and eliminate double-counting or double-selling by providing information on the offset provider/aggregator and project type and location. There are two types of registries. The first type tracks GHG emissions while the second type is known as the carbon credit accounting. In general, registries account for credits resulting from offset projects as well as credit transactions.
Related Entity³	An organization that is linked to the Verification Body by common ownership or directors, contractual arrangement, a common name, informal understanding, or other means such that the related organization has a vested interest in the outcome of an assessment or has a potential ability to influence the outcome of an accredited management system assessment, or GHG verification effort.

Terminology	
Term	Definition
Renewable Energy	Energy created from resources that are regenerative or renewable and cannot be depleted. Examples include wind, solar, and water power. These resources are safe for our environment and produce energy without the harmful pollutants and emissions associated with fossil fuels.
Renewable Energy¹	Energy from sources that constantly renew themselves or that are regarded as practically inexhaustible. Renewable energy includes, but is not limited to, energy derived from solar, wind, geothermal, hydro-electric, wood biomass, tidal power, sea currents, and ocean thermal gradients.
Renewable Energy Credits (RECs)	The environmental and economic value of electricity produced from clean, renewable, and emission-free energy resources that are safe for our environment and will never be depleted. RECs hold real and quantifiable economic value and act like a form of currency that allows the environmental attributes of renewable energy generation to be separated from the electricity commodity and to be sold as a separate product.
Report Year¹	The calendar year for which emissions are being reported in the emissions data report.
Reporter³	An entity that submits an emissions inventory based on the requirements in the General Reporting Protocol to the Registry.
Reporting Uncertainty³	The errors made in identifying emissions sources and managing and calculating GHG emissions. This differs from inherent uncertainty due to incomplete understanding of climate science or a lack of ability to measure GHG emissions.
Reporting Year³	The year in which the emissions you are reporting to the Registry occurred. For example, in 2010, you would report for the 2009 reporting year (emissions that occurred in 2009).
Repulpable	The ability of waste paper to be converted into good quality secondary fiber. The process involves converting the waste paper into a slurry form and separating the intertwined fibers into individual fibers.
Reservoir²	Either (1) a component or components of the climate system where a greenhouse gas or a precursor of a greenhouse gas is stored; or (2) Water bodies regulated for human activities (energy production, irrigation, navigation, recreation, etc.) where substantial changes in water area due to water level regulation may occur.
Residence Time²	Average time spent in a reservoir by an individual atom or molecule. Also, this term is used to define the age of a molecule when it leaves the reservoir. With respect to greenhouse gases, residence time usually refers to how long a particular molecule remains in the atmosphere.
Residual Fuel Oil¹	A general classification for the heavier oils know as No. 5 and No. 6 fuel oils, that remain after the distillate fuel oils and lighter hydrocarbons are distilled away in refinery operations.

Terminology	
Term	Definition
Respiration²	The process whereby living organisms convert organic matter to carbon dioxide, releasing energy and consuming molecular oxygen.
Retail Provider¹	An entity that provides electricity to retail end users in California and is an electric corporation as defined in Public Utilities Code section 218, electric service provider as defined in section 218.3, public owned electric utility as defined in section 9604, community choice aggregator as defined in section 331.1, or the Western Area Power Administration.
Scope 1 Emissions³	All direct GHG emissions, with the exception of direct CO ₂ emissions from biogenic sources.
Scope 2 Emissions³	Indirect GHG emissions associated with the consumption of purchase or acquired electricity, heating, cooling or steam.
Scope 3 Emissions³	All indirect emissions not covered in Scope 2. Examples include upstream and downstream emissions, emissions resulting from the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, use of sold products and services, outsources activities, recycling of used products, waste disposal, etc.
Screening Value (SV)¹	The instrument reading (in “ppmv”) obtained when components, including but not limited to valves, pump seals, connectors, flanges, open-ended lines and other equipment components, are evaluated for leakage as described in United States Environmental Protection Agency (U.S. EPA) Method 21 Determination of Volatile Organic Compound Leaks.
Secondary Footprint⁴	Emissions that can be traced from our lifestyle choices back to production processes, behaviors, and impacts of the suppliers of our food, appliances and services, all the way back along the supply-chain and life cycle of goods and services we consume. It is difficult to measure it and almost impossible to determine what portion of emissions is attributable to whom. Although we can collectively exert pressure for responsible and sustainable practices it is difficult to evaluate the results of these efforts.
Sector¹	A broad industrial categorization such as specified in section 95101(b) of AB 32.
Self-generation Facility¹	A facility dedicated to serving a particular end user, usually located on the user’s premises. The facility may either be owned directly by the end user or owned by an entity with a contractual arrangement to provide electricity to meet some or all of the user’s load.
Sequestration²	The process of increasing the carbon content of a carbon reservoir other than by the atmosphere. Biological approaches include direct removal of carbon dioxide from the atmosphere through land-use change, afforestation, reforestation, and practices that enhance soil carbon in agriculture. Physical approaches include separation and disposal of carbon dioxide from flue gases or from processing fossil fuels to produce and carbon dioxide-rich fractions and long-term storage in underground in depleted oil and gas reservoirs, coal seams, and saline aquifers.

Terminology	
Term	Definition
Short Ton²	Common measurement for a ton in the United States. A short ton is equal to 2,000 lbs or 0.907 metric tons.
Silt fencing/Sediment traps/ Sediment basins	Methods for controlling sediments around a construction site. Often, bare earth must be exposed, and these devices are designed to keep sediments carried by runoff near the site.
Simplified Estimation Methods³	For purposes of the Registry, rough, upper-bound methods for estimating emissions that are not found in Part III or Appendix E of the GRP. Simplified estimation methods may be used to calculate emissions from one or more sources, for one or more gases, that, when aggregated, equal no more than five percent of an entity's total Scope 1 and Scope 2 emissions, as determined on a CO ₂ equivalent basis.
Sink²	Any process, activity or mechanism that removes a GHG, an aerosol or a precursor of a GHG or aerosol from the atmosphere.
Solar Heat Gain Coefficient (SHGC)	The fraction of solar radiation admitted through a window. SHGC is expressed as a number between 0 and 1. The lower the solar radiation number, the less heat is being transmitted. A high SHGC can help offset a portion of the energy needed for heating in the winter.
Sound Transmission Class (STC)	A number rating the effectiveness by which a material or building technique impairs or prevents the transmission of sound.
Source¹	Greenhouse gas source.
Source²	Any process, activity or mechanism that releases a greenhouse gas, an aerosol or a precursor of a GHG or aerosol into the atmosphere.
Source Reduction	To eliminate waste and use less packaging.
Southwest (SW)¹	Arizona, Nevada, Utah, Colorado, and western New Mexico.
Specified Source of Power¹	A particular generating unit or facility for which electrical generation can be confidently tracked due to full or partial ownership or due to its identification in a power contract including any California eligible renewable resource.
Standard Conditions or Standard Temperature and Pressure (STP)¹	A temperature of 20 degrees Celsius (68 degrees Fahrenheit) and an absolute pressure of 760 mm (30 inches) of mercury or 60 degrees Fahrenheit and 1 atmosphere.
Standard Cubic Foot (scf)¹	The amount of gas that would occupy a volume of one cubic foot if free of combined water at standard conditions.
Standard & Poor's (S&P) 500	Standard and Poor's S&P 500 is a stock market index containing the stocks of 500 Large-Cap corporations, most of which are American that is used to analyze corporate responses to the Carbon Disclosure Project.

Terminology	
Term	Definition
Stationary¹	Neither portable nor self propelled and operated at a single facility.
Stationary Combustion Emissions³	Emissions form the combustion of fuels to produce electricity, steam, heat or power using equipment (boilers, furnaces, etc.) in a fixed location.
Stationary Source²	Non-mobile sources such as power plants, refineries, and manufacturing facilities which emit air pollutants.
Storage Tank¹	Any tank, other container, or reservoir used for the storage of organic liquids, excluding tanks that are permanently affixed to mobile vehicles such as railroad tank cars, tanker trucks or ocean vessels.
Stormwater Management System	A system designed to catch, retain, divert, and/or use a sudden influx of water that results from rainfall or snowmelt.
Structural Change³	A change in the organizational or operational boundaries of a company that result from a transfer of ownership or control of emissions from one company to another. Structural changes usually result from a transfer of ownership of emissions, such as mergers, acquisitions, divestitures, but can also include in sourcing and outsourcing.
Submitting Year³	The year in which you are submitting your emission report. For example, when submitting a report in 2015 for emissions that occurred in 2014, your submitting year would be 2015. The submitting year is always the year following the reporting year.
Sulfur Dioxide (SO₂)²	A compound composed of one sulfur and two oxygen molecules. Sulfur dioxide emitted into the atmosphere through natural and anthropogenic processes is changed in a complex series of chemical reactions in the atmosphere to sulfate aerosols. These aerosols are believed to result in negative radiative forcing (i.e., tending to cool the Earth's surface) and so result in acid deposition (e.g. acid rain).
Sulfur Hexafluoride (SF₆)¹	A GHG consisting on the molecular level of a single sulfur atom and six fluorine atoms. A colorless, gas soluble in alcohol and ether, slightly soluble in water. A very powerful greenhouse gas with a global warming potential most recently estimated at 22,800 times that of carbon dioxide (CO ₂). SF ₆ is used primarily in electrical transmission distribution systems and as a dielectric in electronics.
Sulfur Recovery Unit (SRU)¹	A process unit that recovers elemental sulfur from gases that contain reduced sulfur compounds and other pollutants, usually by a vapor-phase catalytic reaction of sulfur dioxide and hydrogen sulfide.
Supplemental Firing¹	An energy input to the cogeneration facility used only in the thermal process of a topping-cycle plant, or in the electricity generating or manufacturing process of a bottoming-cycle plant.

Terminology

Term	Definition
Supply Chain Efficiency	Two supply chains exist in virtually all forms of commerce, the physical and the financial supply chain. The management of the physical supply chain has evolved from physical logistics management to more sophisticated transaction management and now to planning and collaboration between trading partners. Most companies have spent the last few years focusing on improving physical supply chain efficiency. Benefits include shorter time to market, reduced production costs, reduced inventory costs, and better collaboration between partners.
Surveillance³	Set of activities, except reassessment, to monitor the continued fulfillment by accredited CABs of requirements of accreditation. Note: Surveillance includes both surveillance on-site assessments and other surveillance activities, such as the following: a) Enquiries from the Accreditation Body to CAB on aspects concerning the accreditation; b) Reviewing the declarations of CAB with respect to what is covered by the accreditation; c) Requests to CAB to provide documents and records (e.g., audit reports, results of internal quality control for verifying the validity of CAB services, complaints record, management review records); and d) Monitoring performance of CAB (such as results of proficiency testing).
Sustainability	Actions we take that support quality of life now and for future generations. "To create an enduring society, we will need a system of commerce and production where each and every act is inherently sustainable and restorative. Business will need to integrate economic, biologic and human systems to create a sustainable method of commerce." - Paul Hawkins, Ecology of Commerce, 1993.
Sustainable Development	<p>Development which meets the needs of present generations without compromising the ability of future generations to meet their own needs. Development which is not detrimental to earth's natural resources, or one which makes the use of renewable energy sources such as wind energy or solar energy. A positive rate of change in the quality of life (i.e. well being) of people based on a system which permits this positive rate of change to be maintained for an indefinite period of time." - Elliot Rosenberg.</p> <p>Sustainable development is economic growth that will benefit present and future generations without detrimentally affecting the resources or biological systems of the planet. Sustainable development is development that meets the needs of the present without compromising the ability of the future generation to meet their needs - Brundtland Report, 1987.</p>
Sustainable Society	One that lives within the self-perpetuating limits of its environment. That society is not a 'no growth' society - it is, rather, a society that recognizes the limits of growth and looks for alternative ways of growing. - James Coomer.

Terminology	
Term	Definition
Terrestrial	The process through which carbon dioxide (CO ₂) from the atmosphere is absorbed by trees, plants and crops through photosynthesis, and stored as carbon in biomass (tree trunks, branches, foliage and roots) and soils. The term "sinks" is also used to refer to forests, croplands and grazing lands, and their ability to sequester carbon. Agriculture and forestry activities can also release CO ₂ to the atmosphere. Therefore, a carbon sink occurs when carbon sequestration is greater than carbon releases over some time period.
Thermal Host¹	The user of the steam or heat output of a cogeneration facility.
The Greatest Good	The "greatest good for the greatest number" applies to the [number of] people within the womb of time, compared to which those now alive form but an insignificant fraction. Our duty to the whole, including the unborn generations, bids us to restrain an unprincipled present-day minority from wasting the heritage of these unborn generations. - Franklin Roosevelt, 1916.
The Natural Step (TNS)	Established by Dr. Karl Henrik Robert in 1989. Articulates conditions that lead to sustainability and provides systems approach to explain linkage between ecology and economy. Represents international scientific consensus on sustainability. The TNS System Conditions or Laws of Nature are as follows: 1) Matter and energy cannot be created or destroyed (wastes do not disappear, waste disposal is a myth). 2) Society consumes quality, purity or structure of matter – not molecules (by turning natural resources into dispersed waste faster than nature reconstitutes waste to resources, we become collectively poorer). 3) Increases in order are derived from sun-driven processes (photosynthesis is primary means to reconstitute disorder to net order).
Thermal Bridge	The part of a building envelope where heat is transferred at a much higher rate than the surrounding area. Windows doors are two common examples thermal bridging areas. insulating spacers is one way to remedy the problem and minimize rapid heat loss or heat gain.
Thermal Mass	The ability of a material to absorb heat. Materials with a high thermal mass operate much like thermal sponges, because they cool a building during the summer by absorbing heat from the sun and releasing it over a period of time. Thermal mass should be used in addition to, but not a substitution for insulation.
Thrid party Certifications	Independent laboratories that quantify the performance of products.
Ton¹	A short ton equal to 2,000 pounds.
Topping Cycle Plant¹	A cogeneration facility in which the energy input to the facility is first used to produce useful power output, and at least some of the reject heat from the power production process is then used to provide useful thermal output.
Total Organic Carbon (TOC)¹	A measure of the total organic carbon molecules present in a sample.

Terminology	
Term	Definition
Total Organic Gases (TOG)²	Gaseous organic compounds, including reactive organic gases and the relatively unreactive organic gases such as methane.
Transferred CO₂¹	Carbon dioxide that is not emitted directly at the facility, but is sold and/or transferred out of an installation as a pure substance.
Transitional Reporter³	A reporter that opts to provide a partially complete emission report, covering fewer than the six internationally recognized GHGs (but CO ₂ from stationary combustion at a minimum) and/or one or more states or provinces. This option is available only during a Reporter's first two reporting years.
Transparency²	Assumptions and methodologies used for an inventory should be clearly explained to facilitate replication and assessment of the inventory by users of the reported information. The transparency of inventories is fundamental to the success of the process for the communication and consideration of information.
Trend²	The trend of a quantity measures its change over a time period, with a positive trend value indicating growth in the quantity, and a negative trend value indicating a decrease. It is defined as the ratio of the change in the quantity over the time period, divided by the initial value of the quantity, and is usually expressed either as a percentage or a fraction.
Triple Bottom Line	Triple bottom line accounting means expanding the traditional reporting framework to take into account environmental and social performance in addition to financial performance. - John Elkington, 1994.
Uncertainty¹	The rate of window heat loss. The U-factor is the inverse of the R-value in that the lower the U-factor is, the higher its insulating value. To achieve energy efficiency, cold climate demands windows with a U-factor of 0.35 or less. Some three-layer products have U-factors even as low as 0.15.
Uncertainty¹	The degree to which data or a data system is deemed to be indefinite or unreliable.
United Nations Framework Convention on Climate Change (UNFCCC)⁴	An international treaty that sets an overall framework for inter-governmental efforts to tackle the challenge posed by climate change. It recognizes that the climate system is a shared resource whose stability can be affected by industrial and other emissions of carbon dioxide and other greenhouse gases. The Convention enjoys near universal membership, with 192 countries having ratified. Its text encourages countries to adhere to efforts to address the problem of climate change, however it is not a binding agreement. Under the Convention, governments: gather and share information on GHG emissions, national policies and best practices; launch national strategies for addressing greenhouse gas emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; cooperate in preparing for adaptation to the impacts of climate change. The Convention entered into force on 21 March 1994.

Terminology

Term	Definition
United States Green Building Council (USGBC)	The nation's foremost coalition of leaders from across the building industry working to promote buildings that are environmentally responsible, profitable, and healthy places to work and live.
Unspecified Source of Power¹	Electricity generation that cannot be matched to a particular generating facility. Unspecified sources of power may include power purchased from entities that own fleets of generating facilities such as independent power producers, retail providers, and federal power agencies and power purchased from electricity marketers, brokers, and markets.
Up-cycling	Reusing a material in a fashion that does not downgrade its quality.
Urban run-off	Includes pollutants from automobiles, salt or silt from roadways, fertilizers or lawn maintenance pollutants, or other foreign material entering the water table by way of impervious surfaces.
Useful Power Output¹	The electric or mechanical energy made available for use, exclusive of any such energy used in the power production process.
Useful Thermal Output¹	Thermal energy made available in a cogeneration system for use in any industrial or commercial process, heating or cooling application, or delivered to other end users, i.e., total thermal energy made available for processes/applications other than electrical generation.
Verification¹	The process used to ensure that an operator's emissions data report is free of material misstatement and complies with ARB's procedures and methods for calculating and reporting GHG emissions.
Verification³	<p>An independent assessment of the reliability (considering completeness and accuracy) of a GHG inventory.</p> <p>The process used to ensure that a given Reporter's greenhouse gas emissions inventory has met a minimum quality standard and complied with the Registry's procedures and protocols for calculating and reporting GHG emissions.</p> <p>Systematic, independent, and documented process for the evaluation of GHG assertions against agreed verification criteria.</p>
Verification Activities³	Activities undertaken during the third-party verification that include reviewing reported emissions, verifying their accuracy according to standards specified in the Registry's GVP, and submitting a Verification Statement to the Registry.
Verification Body¹	A firm or AQMD/APCD accredited by ARB that is able to render a verification opinion and provide verification services for operators subject to reporting under this article.
Verification Body³	Body that performs verification of GHG assertions in accordance with ISO 14065.

Terminology

Term	Definition
Verification Cycle¹	One year of full verification and the next consecutive two years of less intensive verification for operators subject to annual verification. For operators subject to triennial verification, a "verification cycle" means one year of full verification, and if elected, the next consecutive two years of less intensive verification. A verification cycle cannot exceed three calendar years.
Verification Opinion¹	The final opinion rendered by a verification body attesting whether an operator's emissions data report is free of material misstatement and a qualifying statement whether the emissions data report conforms to the requirement of this article.
Verification Services¹	A detailed report that a Verification Body prepared for a Reporter, describing the scope of the verification activities, standards used, emissions sources identified, sampling techniques, evaluation of Reporter's compliance with the General Reporting Protocol, assumptions and a list of material and immaterial misstatements, if any.
Verification Services¹	Services provided during verification as specified in section 95131 of AB 32, including but not limited to reviewing an operator's emissions data report, verifying its accuracy according to the standards specified in this article, assessing the operator's compliance with this article, and submitting a verification opinion to the ARB.
Verification Statement³	A one-page document stating the Verification Body's findings that the Reporter's emissions report is verifiable (or not).
Verification Team¹	All of those working for a verification body, including all subcontractors, to provide verification services for an operator. The lead verifier for the verification team shall be a lead verifier in the verification body.
Verification Team³	Employees or subcontractors of a Verification Body, acting for Verification Body, to provide verification services for a Reporter.
Verified Emission Reductions⁴	For voluntary abatement projects outside the Kyoto protocol, VER's are available for sale to corporations and individuals who want to offset their emissions for non-regulatory purposes. These offsets are not certified by a regulatory authority for use as a compliance instrument, but can be verified by independent agents requirements.
Verified Emission Report³	An Annual GHG emission report that has been reviewed and approved by a third-party Verification Body and accepted by the Registry.
Verifier¹	An individual accredited by ARB to carry out verification services as specified in section 95131.
Verifier³	Competent and independent person, or persons, with responsibility for performing and reporting the verification process (under the management and supervision of a Lead Verifier).

Terminology	
Term	Definition
Voluntary Emission Reduction	Voluntary emission reductions (VERs) are carbon credits, developed by carbon offset providers, which are not certified.
Voluntary Offsetting	Offsetting purchases made by individuals, businesses, and institutions that are not legally mandated.
Volatile Organic Compounds (VOCs)¹	Any volatile compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions.
Voluntary Carbon Standard (VCS)⁴	The VCS is an international standard for evaluating emission reducing projects and their resulting offsets. It was created over a two year period by representatives of industry, NGOs and market specialists, led by the International Emissions Trading Association (IETA) and the World Business Council for Sustainable Development (WBCSD). It is designed to provide assurance for certification of credible voluntary offsets.
Voluntary Market⁴	Markets established through a voluntary or negotiated agreement as a tool of environmental policy and market structure. Voluntary markets have existed since 1989 and are considered important instruments for achievement of environmental targets as well as sources of innovation and experimentation in carbon markets.
Voluntary Measures⁴	Measures to reduce GHG emissions that are adopted in the absence of government mandates.
Waste-derived Fuel¹	A fuel typically derived from waste(s) and generally used as a substitute for conventional fossil fuels. Waste-derived fuels can include fossil fuels such as waste oil, plastics, or solvents; biomass such as dried sewage or impregnated saw dust; or fractions or both fossil fuels and biomass such as municipal solid waste or tires.
Wastewater¹	Any process water which contains oil, emulsified oil, or other organic compounds that are not recycled or otherwise used in a facility.
Wastewater Separator¹	Equipment used to separate oils and water from locations downstream of process drains.
Water Vapor²	The most abundant greenhouse gas; it is the water present in the atmosphere in gaseous form. Water vapor is an important part of the natural greenhouse effect. While humans are not significantly increasing its concentration, it contributes to the enhanced greenhouse effect because the warming influence on GHG leads to a positive water vapor feedback. In addition to its role as a natural greenhouse gas, water vapor plays an important role in regulating the temperature of the planet because clouds form when excess water vapor in the atmosphere condenses to form ice and water droplets and precipitation.
Weather²	Atmospheric condition at any given time or place. It is measured in terms of such things as wind, temperature, humidity, atmospheric pressure, cloudiness, and precipitation. In most places, weather can change from hour-to-hour, day-to-day and season-to-season.

Terminology

Term	Definition
Wind Energy	A clean source of energy produced when specially designed wind turbines capture the wind to generate electricity.
Witness Assessment³	Assessment conducted by an Accreditation Body to verify and observe the competence of an evaluation/inspection/audit conducted by an applicant or accredited body.

- Sources include:**
- 1 - California AB 32 and Mandatory Reporting Rule (www.arb.ca.gov)
 - 2 - California ARB Draft Climate Change Scoping Plan www.arb.ca.gov)
 - 3 - The Climate Registry (General Reporting Protocol, General Verification Protocol and Guidance on Accreditation) (www.theclimateregistry.org)
 - 4- www.retractimpact.org

Terms and definitions obtained from sources indicated above. This list of terms is provided as a guide and is not intended to be inclusive of all terms and definitions, nor is it meant to be an endorsement of the sources. Any errors in the terms or definitions are unintended.

Internet Resources	
Name	Website
A Global Overview of Renewable Energy Sources (AGORES)	http://www.agores.org
Alternative Energy	http://www.alternativeenergy.com
American Council for an Energy Efficient Economy (ACEEE)	http://www.aceee.org
American Institute of Architects (AIA), Sustainability Resource Center	http://www.aia.org/susn_rc_cl_default
American Solar Energy Society (ASES)	http://www.ases.org/
American Wind Energy Association (AWEA)	http://www.awea.org
Arctic Energy Alliance	http://www.aea.nt.ca/
Association of Energy Service Professionals (AESP)	http://www.aesp.org
Associations of State and Territorial Solid Waste Management Officials	http://www.astswmo.org
Bioenergy Feedstock Information Network	http://bioenergy.ornl.gov/
Business for Social Responsibility (BSR)	http://www.bsr.org/
Business Week	http://www.businessweek.com
California Climate Action Registry	http://www.climateregistry.org/
Center for Renewable Energy and Sustainable Technology (CREST)	http://www.crest.org
Chicago Climate Exchange (CCX)	http://www.chicagoclimatex.com/
Cleanup Information (CLU-IN)	http://www.cluin.org/
Clean Vehicle Education Foundation	http://www.cleanvehicle.org/technology/cylinder.html
Cleantech	http://www.cleantech.com
Coalition for Environmentally Responsible Economies (CERES)	http://www.ceres.org/page.aspx?pid=705
Contaminated Land: Applications in Real Environments (CLAIRE)	http://www.claire.co.uk/

Note: This list of internet addresses is provided as a resource and is not intended to be inclusive of all sources of information, nor is it intended to be an endorsement of the source. Any errors in internet addresses is unintended; website addresses may change.

Internet Resources

Name	Website
Corporate Social Responsibility Newswire	http://www.csrwire.com/News/11803.html
CSA America	http://www.csa-america.org/
Danish Wind Industry Association	http://www.windpower.org/en/core.htm
District of Columbia, District Department of the Environment	http://ddoe.dc.gov/ddoe/site/default.asp?ddoeNav=1
Energy Atlas, Renewable Energy Atlas of the West	http://www.energyatlas.org/
Envirolink, Online Environmental Community	http://www.envirolink.org/
Environmental Business Journal	http://www.ebiusa.com/
Federal Remediation Technologies Roundtable (FRTR), Remediation Optimization	http://www.frtr.gov/optimization
Geoexchange, Geothermal Heat Pump Consortium	http://www.geoexchange.org
Geothermal Energy Association	http://www.geo-energy.org
Global Environmental Management Initiative (GEMI)	http://www.gemi.org
Global Reporting Initiative (GRI)	http://www.globalreporting.org
Green Biz	http://www.greenbiz.com/
Green Suppliers Network	http://www.greensuppliers.gov/gsn/home.gsn
Greenhouse Gas Protocol Initiative	http://www.ghgprotocol.org/
Greenhouse Gas Institute	http://www.ghginstitute.org/
Greenwire	http://www.eenews.net/gw/
Idaho National Energy Laboratory (INEL), Geothermal Energy	http://geothermal.inel.gov/
Intergovernmental Panel on Climate Change (IPCC)	http://www.ipcc.ch/
International Institute for Sustainable Development (IISD)	http://www.iisd.org/
International Institute for Sustainable Development, Global Directory of Indicator Initiatives	http://www.iisd.org/measure/compendium/
International Network for Environmental Management (INEM)	http://www.inem.org

Internet Resources

Name	Website
International Solar Energy Society (ISES)	http://www.ises.org
Interstate Technology and Regulatory Council (ITRC)	http://www.itrcweb.org/
Midwestern Greenhouse Gas Reduction Accord (MGA)	http://www.midwesternaccord.org/
Million Solar Roofs Initiative	http://www.millionsolarroofs.com
My Green Scene	http://www.mygreenscene.com
National Association of Environmental Management, EHS Management	http://www.naem.org
National Biodiesel Board	http://www.biodiesel.org
National Renewable Energy Laboratory (NREL), Renewable Resource Data Center (RReDC)	http://www.nrel.gov/rredc/
New England Governors, Eastern Canadian Premiers, Climate Change Action Plan, 2001	http://www.negc.org/documents/NEG-ECP%20CCAP.PDF
Next Generation Earth, U.S. State Impacts	http://www.nextgenerationearth.org/usstates/state-list/
Northeast Sustainable Energy Association (NESEA)	http://www.nesea.org
Petroleum Environmental Research Forum (PERF)	http://www.perf.org
Pew Center on Global Climate Change	http://www.pewclimate.org/
Piedmont Biofuels	http://www.biofuels.coop/
Point Carbon	http://www.pointcarbon.com/
Regional Greenhouse Gas Initiative (RGGI), Northeast and Mid-Atlantic Initiative	http://www.rggi.org/home
Renewable Energy World	http://www.renewableenergyworld.com/rea/home
Renewable Fuels Association, Ethanol	www.ethanolrfa.org
Smart Growth Online	http://www.smartgrowth.org/
Social Accountability International	http://www.sa-intl.org
Solar Energy Industries Association (SEIA)	http://www.seia.org/
Southern California Gas, Self-Generation Incentive Program	http://www.socalgas.com/business/documents/2007_SGIP_Handook.pdf

Internet Resources

Name	Website
State Guide, Pew Center, What's Being Done in the States	http://www.pewclimate.org/what_s_being_done/in_the_states/
State of Alabama, Department of Environmental Management	http://www.adem.alabama.gov/index.htm
State of Alaska, Department of Environmental Conservation, Division of Air Quality	http://www.dec.state.ak.us/air/cc.htm
State of Arizona, Climate Action Initiative	http://www.azclimatechange.gov/index.html
State of Arkansas, Climate Change	http://www.arclimatechange.us/
State of California, Climate Change portal	http://www.climatechange.ca.gov/
State of California, Green Remediation	http://www.dtsc.c.gov/omf/GrnRemediation.cfm
State of California, Governors' Office of Planning and Research	http://www.opr.ca.gov
State of Colorado, Climate Project	http://www.coloradoclimate.org/
State of Connecticut, Climate Change	http://ctclimatechange.com/index.html
State of Delaware, Climate News	http://www.dnrec.delaware.gov/
State of Florida, Energy Commission	http://www.floridaenergycommission.gov/
State of Georgia, Forestry Commission, Georgia Carbon Sequestration Registry	http://www.gacarbon.org/
State of Hawaii, Hawaii Climate Change Action Plan	http://hawaii.gov/dbedt/info/energy/publications/ccap.pdf
State of Idaho, Soil Conservation Commission, Carbon Sequestration	http://www.scc.idaho.gov/carbon%20sequestration%20main.htm
State of Illinois, Environmental Protection Agency	http://www.epa.state.il.us/index.html
State of Illinois, EPA, Greener Cleanups	http://www.epa.state.il.us/land/green-cleanups
State of Indiana, Department of Environmental Management	http://www.in.gov/idem/
State of Iowa, Department of Natural Resources	http://www.iowadnr.gov/news/08sep/greenhouse.html
State of Kansas, Department of Health and Environment, Bureau of Air and Radiation	http://www.kdheks.gov/bar/index.html
State of Kentucky, Department for Energy Development and Independence	http://energy.ky.gov/dre3/default.htm

Internet Resources

Name	Website
State of Maine, Department of Environmental Protection, Bureau of Air Quality	http://www.maine.gov/dep/air/greenhouse/
State of Maryland, Maryland Climate Commission, Climate Action Plan	http://www.mde.state.md.us/assets/document/Air/ClimateActionPlanClips_082908.pdf
State of Massachusetts, The Commonwealth of Massachusetts, Climate Protection Plan	http://masstech.org/renewableenergy/public_policy/DGresources/2004_MA_Climate_Protection_Plan.pdf
State of Michigan, Department of Environmental Quality	http://www.michigan.gov/deq/0,1607,7-135--160634--,00.html
State of Minnesota, Climate Change Advisory Group	http://www.mnclimatechange.us/index.cfm
State of Mississippi, Forestry Commission, Carbon Sequestration	http://www.mfc.state.ms.us/carbon_sequestration.htm
State of Missouri, Department of Natural Resources	http://www.dnr.mo.gov
State of Montana, Montana Department of Environmental Quality, Climate Change Advisory Committee	http://www.mtclimatechange.us/
State of Nebraska, Nebraska Department of Natural Resources, Carbon Sequestration, Greenhouse Gas Emissions, and Nebraska Agriculture	http://www.dnr.state.ne.us/Carbon/Carbonprintcopy.pdf
State of Nevada, Nevada Climate Change Advisory Committee	http://www.gov.state.nv.us/climate/
State of New Hampshire, Department of Environmental Services, Air Resources Division	http://www.des.nh.gov/ard/climatechange/challenge.pdf
State of New Jersey, NJ Green, Global Warming Guide	http://newjersey.gov/nj/green/global/
State of New Mexico, Environmental Department	http://www.nmenv.state.nm.us/cc/index.html
State of New York, Energy Research and Development Authority	http://www.nyserda.org/Energy_Information/energy_state_plan.asp
State of North Dakota, ND Climate, Global Warming and North Dakota	http://www.ndclimate.org/
State of Ohio, Environmental Protection Agency, Climate Change	http://www.epa.state.oh.us/dir/ccohio.html
State of Oregon, Climate Change in Oregon	http://www.oregon.gov/ENERGY/GBLWRM/Portal.shtml
State of Pennsylvania, Environmental Council	http://www.pecpa.org/roadmap.htm

Internet Resources

Name	Website
State of South Carolina, Climate, Energy, and Commerce Advisory Committee	http://scclimatechange.us/
State of Tennessee, Energy Division	http://www.state.tn.us/ecd/energy_init.htm
State of Utah, Climate Change Guide	http://www.deq.utah.gov/Climate_Change/index.htm
State of Virginia, Department of Mines, Minerals, and Energy, Virginia Energy Plan	http://www.governor.virginia.gov/TempContent/2007_VA_Energy_Plan-Full_Document.pdf
State of Washington, Department of Ecology, Climate Change Guide	http://www.ecy.wa.gov/climatechange/index.htm
State of Wisconsin, Department of Natural Resources, Governor's Task Force of Global Warming	http://dnr.wi.gov/environmentprotect/gtfgw/
State of Wyoming, Climate Change	http://www.wrds.uwyo.edu/sco/climate_office.html
Sustainable Business	http://www.sustainablebusiness.com/
Sustainable Energy Coalition	http://www.sustainableenergycoalition.org/
The Climate Registry	http://www.theclimateregistry.org/
Triad Resource Center	http://www.triadcentral.org/
University of North Dakota, Energy and Environmental Research Center (UNDEER)	http://www.undeerc.org
U.S. Air Force Center for Engineering and the Environment (AFCEE)	http://www.afcee.af.mil/
U.S. AFCEE Sustainable Remediation Tool	http://www.afcee.af.mil/resources/technologytransfer/programsandinitiatives/sustainableremediation/srt/index.asp
U.S. Business Council for Sustainable Development	http://www.usbcsd.org/
U.S. DOE, Carbon Sequestration	http://www.fossil.energy.gov/programs/seqestration/
U.S. DOE, Efficiency and Renewable Energy, Solar Energy Technologies Program	http://www.eere.energy.gov/solar/animations.html
U.S. DOE, Energy Efficiency and Renewable Energy	http://www.eere.energy.gov/
U.S. DOE, Energy Efficiency and Renewable Energy (EERE), Federal Energy Management Program (FEMP)	http://www.eere.energy.gov/femp

Internet Resources

Name	Website
U.S. DOE, Energy Star	http://www.energystar.gov/
U.S. DOE, Green Power Network, Renewable Energy Certificates	http://apps3.eere.energy.gov/greenpower/markets/certificates.shtml?page=1
U.S. DOE /National Energy Technology Laboratory (NETL)	http://www.netl.doe.gov
U.S. DOE/ National Renewable Energy Laboratory, Solar Research	http://www.nrel.gov/solar/
U.S. DOE/ National Renewable Energy Laboratory, Wind Research	http://www.nrel.gov/wind/
U.S. DOE/ EERE, State Activities and Partnerships: Waste-to-Energy Projects Gain Momentum in the United States	http://www.eere.energy.gov/states/state_news_detail.cfm/news_id=10404/state=AL
U.S. DOE/National Renewable Energy Laboratory	http://www.nrel.gov/
U.S. EPA, Protocol for Quantifying and Reporting the Performance of Anaerobic Digestion Systems for Livestock Manures	http://www.epa.gov/agstar/pdf/protocol.pdf
U.S. EPA, Biodiesel Guide	http://www.epa.gov/smartway/growandgo/documents/factsheet-biodiesel.htm
U.S. EPA, Carbon Sequestration in Agriculture and Forestry	http://www.epa.gov/sequestration/
U.S. EPA, Clean Alternative Fuels: Fischer-Tropsch Fact Sheet	http://www.afdc.energy.gov/afdc/pdfs/epa_fischer.pdf
U.S. EPA, Clean Construction USA, Construction Air Quality Language	http://www.epa.gov/diesel/construction/contract-lang.htm
U.S. EPA, Clean Energy: Greenhouse Gas Equivalencies Calculator	http://www.epa.gov/cleanenergy/energy-resources/calculator.html
U.S. EPA, Cleaner Diesels: Low Cost Ways to Reduced Emissions for Construction Equipment	http://www.epa.gov/sectors/pdf/emission_0307.pdf
U.S. EPA, Climate Change	http://www.epa.gov/climatechange/
U.S. EPA, Climate Change, Greenhouse Gas Emissions	http://www.epa.gov/climatechange/emissions/usinventoryreport.html
U.S. EPA, Climate Change, State and Local Governments	http://www.epa.gov/climatechange/wycd/stateandlocalgov/
US EPA Climate Leaders Program	http://www.epa.gov/climateleaders/
U.S. EPA, CLU-IN Technology Focus: Phytoremediation	http://clu-in.org/techfocus/default.focus/sec/Phytoremediation/cat/Overview/

Internet Resources

Name	Website
U.S. EPA, CLU-IN, Technology Focus	http://clu-in.org/techfocus/
U.S. EPA, Combined Heat and Power Partnership	http://www.epa.gov/chp/
U.S. EPA, EcoTools: Tools for Ecological Land Reuse	http://clu.in.org/products/ecorestoration/
U.S. EPA, Effluent Limitation Guidelines	http://www.epa.gov/waterscience/guide/index.html
U.S. EPA, Green Power Partnership: Green Power Equivalency Calculator	http://www.epa.gov/grnpower/pubs/calculator.htm
U.S. EPA, Green Remediation Primer	http://www.cluin.org/download/remed/Green-Remediation-Primer.pdf
U.S. EPA, GreenScapes	http://www.epa.gov/epawaste/partnerships/greenscapes/index.htm
U.S. EPA, Guidance for Evaluating Landfill Gas Emissions From Closed or Abandoned Facilities	http://www.epa.gov/nrmrl/pubs/600r05123/600r05123.pdf
U.S. EPA, Introduction to Energy Conservation and Production at Waste Cleanup Sites	http://www.epa.gov/swertio1/tsp/download/epa542s04001.pdf
U.S. EPA, Landfill Methane Outreach Program	http://www.epa.gov/landfill/
U.S. EPA, Municipal Waste Guide	http://www.epa.gov/msw/reduce.htm
U.S. EPA, Office of Solid Waste and Emergency Response (OSWER), Green Remediation and the use of Renewable Energy Sources for Remediation Projects	http://www.clu-in.org/download/studentpapers/Green-Remediation-Renewables-A-Dellens.pdf
U.S. EPA, OSWER, Green Remediation: Incorporating Sustainable Environmental Practices into Remediation of Contaminated Sites	http://www.clu-in.org/download/remed/green-remediation-primer.pdf
U.S. EPA, OSWER, The Use of Soil Amendments for Remediation, Revitalization, and Reuse	http://www.clu-in.org/s.focus/c/pub/i/1515/
U.S. EPA, Reducing Stormwater Costs through Low Impact Development Strategies & Practices	http://www.epa.gov/owow/nps/lid/costs07/
U.S. EPA, Region 9 Online, Cleanup-Clean Air Initiative	http://www.epa.gov/region09/cleanup-clean-air/
U.S. EPA, Sector Strategies Program	http://www.epa.gov/ispd/
U.S. EPA, Sector Strategies Program, Construction Guide	http://www.epa.gov/sectors/construction
U.S. EPA, Sustainability Guide	http://www.epa.gov/sustainability/

Internet Resources

Name	Website
U.S. EPA, Turning a Liability into an Asset: A Landfill Gas-to-Energy Project Developments Handbook	http://www.epa.gov/lmop/res/pdf/handbook.pdf
U.S. General Services Administration (GSA), Go Green: GSA Environmental Initiatives	http://www.gsa.gov/Portal/gsa/ep/home.do?tabId=11
U.S. Green Building Council	http://www.usgbc.org/
U.S. Mayors Climate Protection Center and Agreement	http://www.usmayors.org/climatehttp://www.ucsus.org/global_warming/climateprotection/about.htm
United Kingdom, Sustainable Development	http://www.defra.gov.uk/sustainable/index.htm
United Nations, Division for Sustainable Development	http://www.un.org/esa/sustdev/
United Nations, Framework Convention on Climate Change (UNFCCC)	http://unfccc.int/2860.php
UNFCCC, Climate Change Information Kit	http://unfccc.int/resource/iuckit/infokit_02_en.pdf
UNFCCC, Kyoto Protocol	http://unfccc.int/resource/docs/convkp/kpeng.html
Union of Concerned Scientists, Global Warming	http://www.ucsusa.org/global_warming/
Western Climate Initiative (WCI)	http://www.westernclimateinitiative.org/
Whole Building Design Guide, Federal Green Construction Guide for Specifiers	http://www.wbdg.org/design/greenspec.ph
World Business Council for Sustainable Development (WBCSD)	http://www.wbcSD.ch/
World Changing	http://worldchanging.com/
Zero Emissions Research Institute	http://www.zeri.org

California Resources

1. California's Climate Change Portal: <http://www.climatechange.ca.gov/>
2. Department of Water Resources (DWR) climate change pages, including local and regional resources (<http://www.water.ca.gov/climatechange/resources.cfm>)
3. DWR climate news (<http://www.water.ca.gov/climatechange/news.cfm>).
4. DWR home page for its climate change program: <http://www.water.ca.gov/climatechange/>
5. DWR climate change events and presentations: <http://www.water.ca.gov/climatechange/events.cfm>
6. DWR Climate change handbook for water planning:
<http://www.water.ca.gov/climatechange/CCHandbook.cfm>
7. Video presented at the March 15, 2012 Climate Change Workshop:
<http://www.water.ca.gov/climatechange/video.cfm>
8. Other DWR videos, including a shorter version of the one presented in the March 15, 2102 workshop:
<http://www.youtube.com/user/calwater?blend=3&ob=5>
9. California Department of Public Health (CDPH) guidance document on climate action and public health:
http://www.cdph.ca.gov/programs/CCDPPH/Documents/CAPS_and_Health_Published3-22-12.pdf
10. March 15, 2012 Climate Change Workshop presentations held in Ventura by three IRWM groups (Watersheds Coalition of Ventura County, Santa Barbara County, and Upper Santa Clara River Watershed): http://portal.countyofventura.org/portal/page/portal/ceo/divisions/ira/WC/Climate_Change_Workshop.
11. April 9, 2012 Governor's Office of Planning and Research (OPR) Climate Change Conference presentations and videos: http://www.opr.ca.gov/s_climateconference.php.
12. May 15, 2012 Workshop on Climate Change and California's Water Supply:
<https://sites.google.com/site/climatechangeucd/>
13. The Mediterranean City: A Conference on ClimateChange Adaptation to be held in Los Angeles June 25-27, 2012: <http://www.cvent.com/events/the-mediterranean-city-conference/event-summary-608171ff129f41ca824e89f112c41848.aspx> .
14. Climate Adaptation:
http://resources.ca.gov/climate_adaptation/local_government/adaptation_policy_guide.html
15. California Climate Change Adaptation Policy - April 2012 Draft: The OPR Conference by the California Natural Resources Agency, California Emergency Management Agency and California Polytechnic State University - San Luis Obispo (Cal Poly) presented the newly released draft Adaptation Policy Guide (APG) for feedback and comments by 5/18/12. The APG provides a method to aid local communities and regional entities in evaluating vulnerabilities and devising strategies to address climate change impacts and a framework to guide decision makers through the critical considerations necessary for adaptation policy development.
http://resources.ca.gov/climate_adaptation/docs/DRAFT_APG_Public_Review_April_2012.pdf

Other Resources

EPA

- Clean Energy-Environmental State Partnership
- Climate Leaders
- Combined Heat and Power Partnership
- ENERGY STAR
- EPA Office of Transportation and Air Quality Voluntary Program
- Green Power Partnership
- High GWP Gas Voluntary Program
- Methane Voluntary Program
- Waste Wise

Federal

- Climate Vision Partnership
- Targeted Incentives for Agricultural GHG Sequestration
- Tax Incentives to Reduce GHG Emissions
- DOE Voluntary GHG Reporting

Source and links to GHG reduction initiative websites:

<http://www.epa.gov/climatechange/policy/earlytermghgreduction.html>

Energy Incentives

- State and Federal Alternative Fuel and Vehicle Incentives
http://www.afdc.energy.gov/afdc/incentives_laws.html
- State and Federal Renewables and Efficiency Incentives
<http://www.deireusa.org>
- Federal Renewable Energy Tax Credits
<http://www.wri.org/publication/bottom-line-series-renewable-energy-tax-credits>

Carbon Footprint and Calculators

Carbon footprint is a measure of the amount of greenhouse gases (GHGs) emitted into the atmosphere each year by a person, household, building, organization or company. The units of measure are pounds, kilograms or tonnes of carbon dioxide equivalents (CO₂e) per year.

A carbon footprint is made up of the sum of two parts, the primary footprint and the secondary footprint.

1. **Primary footprint:** a measure of direct emissions of CO₂e from the burning of fossil fuels including energy consumption and transportation.
2. **Secondary footprint:** a measure of indirect CO₂e emissions from the whole lifecycle of products, i.e., those associated with their manufacture and eventual breakdown.

Information needed to calculate personal carbon footprint:

- Location (country and state)
- Number in household
- Monthly electric, gas and fuel oil bill
- Weekly miles driven by car
- Miles per gallon of car
- Airline flights per year
- Conservation (reduce, reuse, recycle) measures

Example personal calculators:

- http://www.epa.gov/climatechange/emissions/ind_calculator.html
- <http://www.nature.org/initiatives/climatechange/calculator>
- <http://www.carbonfootprint.com>

Example GHG equivalency calculator:

- <http://www.epa.gov/cleanenergy/energy-resource/calculator.html>

Example Climate Change Regulations and Voluntary Initiatives

- California**
- California Global Warming Solutions Act of 2006 (AB 32)
 - Mandatory Reporting Rule for GHG Emissions, Dec. 6, 2007
 - Climate Change Scoping Plan, October 15, 2008, approved December 11, 2008
 - California Environmental Quality Act (CEQA) Guidelines for GHG Emissions, SB 97, August 24, 2007
- Regional:**
- Western Climate Initiative's (WCI) Design Recommendations for the Regional Cap-and-Trade Program, September 23, 2008; and Draft Essential Requirements of Mandatory Reporting, December 5, 2008
- United States:**
- U.S. EPA Advanced Notice of Public Rule Making on Regulations of GHGs under Clean Air Act, July 11, 2008
 - U.S. EPA Proposed Mandatory GHG Reporting Rule, <http://www.epa.gov/climatechange/emissions/ghgrulemaking.html>, March 10, 2009
- Canada:**
- Government Canada, Turning the Corner: An Action Plan to Reduce Greenhouse Gases and Air Pollution, April 26, 2007
 - British Columbia, Climate Action Charter, October 2008
- International:**
- Greenhouse Gas Protocol: Corporate Accounting and Reporting Standard, April 2004; and GHG Protocol for Project Accounting, December 2005
 - Kyoto Protocol, December 11, 1997
 - United Nations Framework Convention on Climate Change (UNFCCC), GHG Inventory, 1992

References

California Air Resource Board (CARB): <http://www.arb.ca.gov>

California Climate Action Registry: <http://www.climateregistry.org>

California Department of Water Resources: <http://www.water.ca.gov/climatechange/>

Greenhouse Gas Protocol: <http://www.ghgprotocol.org/>

Intergovernmental Panel on Climate Change: <http://www.ipcc.ch>

International Standards Organization (ISO) GHG Standards:
http://www.iso.org/iso/iso_catalogue/catalogue_ics/catalogue_ics_browse.htm?ICS1=13&ICS2=20&ICS3=40

Kyoto Protocol: <http://unfccc.int/resource/docs/convkp/kpeng.html>

The Climate Registry: <http://www.theclimateregistry.org>

U.S. Environmental Protection Agency (EPA): <http://www.epa.gov/climatechange/index.html>

Western Climate Initiative: <http://www.westernclimateinitiative.org>