

APPENDIX A

Glossary / Acronyms

Adaptation — Adjustment in natural or human systems to a new or changing environment. Adaptation to climate change refers to adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities. Various types of adaptation can be distinguished, including anticipatory and reactive adaptation, private and public adaptation, and autonomous and planned adaptation.

Anthropogenic — Made by people or resulting from human activities. Usually used in the context of emissions that are produced as a result of human activities.

Base Year — An emissions analysis year for which comprehensive and reliable data can be obtained. It is better to select a more recent base year for which a lot of information can be obtained easily than to spend weeks trying to track down data that may not exist or be incomplete.

California Air Resources Board (CARB) — The CARB is the state agency tasked with implementing AB 32, The California Global Warming Solutions Act of 2006, and achieving the mandated emission reduction goals.

California Climate Action Registry (CCAR) — A private nonprofit 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 emissions by organizations. The California Registry provides leadership on climate change by developing and promoting credible, accurate and consistent GHG reporting standards and tools for organizations to measure, monitor, third-party verify and reduce their emissions consistently across industry sectors and geographical borders.

Carbon Dioxide — Carbon dioxide, abbreviated CO₂, is essential to living systems and released by animal respiration, decay of organic matter and fossil fuel burning. It is removed from the atmosphere by photosynthesis in green plants.

Climate Action Reserve — A national offsets program working to ensure integrity, transparency, and financial value in the U.S. carbon market.

Climate Change — Climate change refers to any significant change in measures of climate (such as temperature, precipitation or wind) lasting for an extended period (decades or longer).

Criteria Air Pollutants (CAPs) —The term criteria air pollutants refers to pollutants that are regulated under the U.S. Clean Air Act. As with carbon dioxide, the major sources of these pollutants are fossil fuels. Most measures that reduce carbon dioxide emissions also reduce criteria air pollutants. Criteria air pollutants include nitrogen oxides (NO_x), volatile organic compounds (VOCs), carbon monoxide (CO), sulfur oxides (SO_x), and particulate matter smaller than ten microns in diameter (PM-10).

Emissions Factor — A unique value for scaling emissions to activity data in terms of a standard rate of emissions per unit of activity (e.g., grams of carbon dioxide emitted per barrel of fossil fuel consumed).

Equivalent Carbon Dioxide (CO₂e) — Equivalent carbon dioxide, abbreviated as CO₂e and also known as global warming potential (GWP), is a unit that allows emissions of greenhouse gases of different strengths to be added together and framed in terms of comparative units. For carbon dioxide itself, emissions in tons of CO₂ and tons of CO₂e are identical, whereas for methane, an example of a stronger

greenhouse gas, 1 ton of methane emissions has the same GWP as 21 tons of CO₂. Thus 1 ton of methane emissions can be expressed as 21 tons of CO₂e.

Global Warming — Global warming describes the recent trend of increasing average global surface and tropospheric (referring to the lowest part of the atmosphere where “weather” phenomena occur) temperatures. The greenhouse gases (CO₂, methane, nitrous oxides, and CFCs) are emitted into the atmosphere and increase the atmosphere’s “entrapment” of heat.

Global Warming Potential (GWP) — Global warming potential is a concept developed by the Intergovernmental Panel on Climate Change that provides a comparative measure of the impacts of different greenhouse gases on global warming, with the effect of carbon dioxide being equal to 1.

Greenhouse Gases and the Greenhouse Effect — The Earth’s climate is determined by a delicate balance between the solar energy that arrives from space and the heat energy that the Earth creates from the sun’s rays. The energy that arrives from space should always equal the energy that the Earth emits back to space. When something disturbs this balance, our climate adjusts by cooling or warming the Earth to return things to normal. A portion of outgoing heat energy is absorbed in the atmosphere by greenhouse gases such as water vapor, carbon dioxide, methane, and nitrous oxide. If these trace gases were not present, the average temperature on the Earth’s surface would be -32 degrees Fahrenheit, and life as we know it would not have evolved here. But the natural greenhouse effect keeps the average global surface temperature at a comfortable 59 degrees Fahrenheit.

IPCC—Intergovernmental Panel on Climate Change —The Intergovernmental Panel on Climate Change (IPCC) was jointly established in 1988 by the World Meteorological Organization and the United Nations Environment Programme to: 1) assess available scientific information on climate change; 2) assess the environmental and socioeconomic impacts of climate change; and, 3) formulate response strategies.

Kyoto Protocol —The Kyoto protocol was adopted by consensus at the third session of the Conference of the Parties (COP-3) in December 1997 in Kyoto, Japan. When ratified by a certain percentage of participating countries, it contains legally binding emissions targets for developed countries in the post-2000 period.

Methane — Methane, abbreviated CH₄, accounted for about 8.6% of U.S. emissions in 2005. Methane is produced by anaerobic decomposition of solid waste in landfills and sewage treatment facilities, wetlands and rice paddies, as a by-product of fossil fuel energy production and transport and also from outgassing in livestock. It is also the principle constituent of natural gas and can leak from natural gas production and distribution systems and is emitted in the process of coal production.

Ozone — An ozone molecule consists of three atoms of oxygen. Ozone is much more reactive than oxygen and is toxic to human beings and living matter. At ground level it forms smog and causes damage to forests and humans. (In the stratosphere, it functions mainly as a filter for ultraviolet radiation and to a lesser extent as a greenhouse gas.)

ROI — Return on Investment: A performance measure used to evaluate the efficiency of an investment or to compare the efficiency of a number of different investments. To calculate ROI, the benefit (return) of an investment is divided by the cost of the investment; the result is expressed as a percentage or a ratio.

AB811 Municipal property tax based financing. Formal name of Legislation is: Contractual Assessments: energy efficiency improvements

AB32 Assembly Bill 32, California's Global Warming Solutions Act of 2006

ABAG Association for Bay Area Governments

AG Attorney General

AIA American Institute of Architects

APY Acre-Feet per Year

ARRA American Recovery and Reinvestment Act

Build It Green (BIG) Non-profit organization, established GreenPoint Rated system

CBSC California Building Standards Commission

CALGreen California's first-in-the-nation Green Building Standards Code

CAP Climate Action Plan

CARB California Air Resources Board

CEC California Energy Commission

CEQA California Environmental Quality Act

CGBSC California Green Building Standards Code

CIP Capital Improvement Program

CPUC California Public Utilities Commission

DMM Demand Management Measures

DSM Demand Side Management

EECBG Energy Efficiency and Conservation Block Grant

ENERGY STAR U.S. government-backed program helping businesses and individuals protect the environment through superior energy efficiency

EPA Environmental Protection Agency

GHG Greenhouse gas

GIS Geographic Information System

GPCD Annual Daily Per Capita Water Use

GPD Gallons Per Day

GreenPoint Rated Residential rating system by non-profit Build It Green

HSR High Speed Rail

HVAC Heating, ventilation, and air conditioning

ICLEI Local Governments for Sustainability

ILG Institute for Local Governments

kW Kilowatt

LED Light-emitting diode

LEED Leadership in Energy and Environmental Design

LEED AP LEED - Accredited Professionals

LEED-EB LEED - certification for a professional that can evaluate LEED for existing buildings

LG Local government

LGOP Local Government GHG Protocol

MTCO2e Metric tons carbon dioxide equivalent

MW Megawatt

OBF On bill financing

PV Photovoltaic

SB375 California Legislation Known as Redesigning Communities to Reduce Greenhouse Gases

SEP California's State Energy Plan

Strategic Plan California Energy Efficiency Strategic Plan

Title 24 The California Building Code governing energy efficiency in buildings

U.S. DOE U.S. Department of Energy

UC University of California

USGBC U.S. Green Building Council, which established the Leadership in Energy and Environmental Design (LEED) green building certification system

VMT Vehicle miles traveled