

## 8 GLOSSARY AND ACRONYMS

The following glossary and acronym list provide definitions of commonly used terms and acronyms. Many of the definitions are from the California Air Resources Board (CARB) December 2008 *Climate Change Scoping Plan Appendices*.

### GLOSSARY

#### **Alternative daily cover (ADC)**

Material used as a temporary overlay to cover an exposed landfill face to reduce insects and vermin. Typical ADC materials include green materials, sludge, ash and kiln residue, compost, construction and demolition debris, and special foams and fabric.

#### **Atmosphere**

The gaseous envelope surrounding the Earth.<sup>1</sup> The dry atmosphere consists almost entirely of nitrogen (78.1 percent volume mixing ratio) and oxygen (20.9 percent volume mixing ratio), together with a number of trace gases, such as argon (0.93 percent volume mixing ratio), helium and radiatively active greenhouse gases (GHGs) such as carbon dioxide (0.035 percent volume mixing ratio) and ozone. In addition, the atmosphere contains the GHG water vapor, whose amounts are highly variable but typically around 1 percent volume mixing ratio. The atmosphere also contains clouds and aerosols.

#### **Average trip length**

The average distance ridden for an unlinked passenger trip (UPT) by time period (weekday, Saturday, Sunday) computed as passenger miles traveled (PMT) divided by unlinked passenger trips (UPT).<sup>2</sup>

#### **Baseline**

A projected level of future emissions against which reductions by project activities might be determined, or the emissions that would occur without policy intervention.<sup>3</sup>

#### **Benzene**

Benzene is a colorless liquid formed from both human-made activities and natural processes. Benzene is widely used in the United States and ranks in the top 20 chemicals used. Two

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<sup>1</sup> City of Benicia, undated. *Climate Action Plan*, page 93.

<sup>2</sup> Federal Transit Administration, National Transit Database Glossary, <http://www.ntdprogram.gov/ntdprogram/Glossary.htm>, accessed on August 30, 2012.

<sup>3</sup> City of Benicia, undated. *Climate Action Plan*, page 93.

natural sources of benzene are volcanoes and forest fires. Benzene is a natural part of crude oil, gasoline, and cigarette smoke. Benzene is one of the major components of JP-8 fuel. Industry is the main source of benzene in the environment. Emissions from burning coal and oil, benzene waste and storage operations, motor vehicle exhaust, and evaporation from gasoline service stations can cause benzene levels in the air to increase. In the air, benzene reacts with other chemicals and breaks down within a few days. Benzene in water and soil breaks down more slowly. Benzene in the environment does not build up in plants or animals.

### **Biogas**

Also known as biomethane, swamp gas, landfill gas, or digester gas—biogas is the gaseous product of anaerobic digestion (decomposition without oxygen) of organic matter.<sup>4</sup> In addition to providing electricity and heat, biogas is useful as a vehicle fuel. When processed to purity standards, biogas is called renewable natural gas and can substitute for natural gas as an alternative fuel for natural gas vehicles. Biogas is usually 50 percent to 80 percent methane and 20 percent to 50 percent carbon dioxide with traces of gases such as hydrogen, carbon monoxide, and nitrogen.

### **Biomass**

Biomass is any plant-derived organic matter.<sup>5</sup> Biomass available for energy on a sustainable basis includes herbaceous and woody energy crops, agricultural food and feed crops, agricultural crop wastes and residues, wood wastes and residues, aquatic plants, and other waste materials including some municipal wastes. Biomass is a very heterogeneous and chemically complex renewable resource.

### **California Energy Commission (CEC)**

The CEC is a five-person commission appointed by the Governor, with Senate confirmation, which acts as the state of California's primary energy policy and planning agency.<sup>6</sup> The CEC is tasked with forecasting future energy needs; promoting energy efficiency and conservation by setting the state's appliance and building efficiency standards; supporting public interest energy research that advances energy science and technology

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<sup>4</sup> US Department of Energy Alternative Fuels Data Center, [http://www.afdc.energy.gov/fuels/emerging\\_biogas.html](http://www.afdc.energy.gov/fuels/emerging_biogas.html), accessed on September 6, 2012.

<sup>5</sup> National Renewable Energy Laboratory Glossary of Biomass Terms, <http://www.nrel.gov/biomass/glossary.html#B>, accessed on September 6, 2012.

<sup>6</sup> California Energy Commission, <http://www.energy.ca.gov/commission/>, accessed on September 6, 2012.

through research, development and demonstration programs; developing renewable energy resources and alternative renewable energy technologies for buildings, industry and transportation; licensing thermal power plants 50 megawatts or larger; and planning for and directing State response to energy emergencies.

**Carbon dioxide equivalent**

The amount of carbon dioxide by weight that would produce the same global warming impact as a given weight of another GHG, based on the best available science, including from the Intergovernmental Panel on Climate Change.<sup>7</sup>

**Carbon intensity**

The intensity of an energy supply, defined as the amount of carbon emitted per unit of energy.

**Carbon sequestration**

The process of increasing the carbon content of a carbon reservoir other than the atmosphere. Biological approaches to sequestration 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 hydrogen- and carbon dioxide-rich fractions and long-term storage in underground depleted oil and gas reservoirs, coal seams, and saline aquifers.

**Climate Action Team**

The Secretary of Cal/EPA leads the Climate Action Team made up of representatives from State agencies, boards, and departments. The CAT members work to coordinate statewide efforts to implement global warming emission reduction programs and the state's Climate Adaptation Strategy. The CAT is also responsible for reporting on the progress made toward meeting the statewide GHG targets that were established by Executive Order S-3-05 and further defined under the Global Warming Solutions Act of 2006 (AB 32).

**Climate Registry**

A national nonprofit registry that provides tools and resources to help calculate, verify, report, and manage GHG emissions in a publicly transparent and credible way.<sup>8</sup>

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<sup>7</sup> California Air Resources Board Glossary of Air Pollution Terms, <http://www.arb.ca.gov/html/gloss.htm>, accessed on August 30, 2012.

### **Corporate Average Fuel Economy (CAFE)**

First enacted by Congress in 1975, the Corporate Average Fuel Economy (CAFE) program and related standards are meant to reduce energy consumption by increasing the fuel economy of cars and light trucks.<sup>9</sup>

### **Fossil fuels**

Fuels such as coal, oil, and natural gas; so-called because they are the remains of ancient plant and animal life.<sup>10</sup>

### **Global Warming Potential (GWP)**

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 GHG to that from emission of one kilogram of carbon dioxide over a period of time (usually 100 years).

### **Greenhouse effect**

The warming effect of the Earth's atmosphere. Light energy from the sun which passes through the Earth's atmosphere is absorbed by the Earth's surface and re-radiated into the atmosphere as heat energy. The heat energy is then trapped by the atmosphere, creating a situation similar to that which occurs in a car with its windows rolled up. A number of scientists believe that the emission of CO<sub>2</sub> and other gases into the atmosphere may increase the greenhouse effect and contribute to global warming.<sup>11</sup>

### **Greenhouse gas (GHG)**

Any gas that absorbs infra-red radiation in the atmosphere. GHGs include water vapor, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), halogenated fluorocarbons (HCFCs), ozone (O<sub>3</sub>), perfluorocarbons (PFCs), sulfur hexafluoride (SF<sub>6</sub>), and hydrofluorocarbons (HFCs).

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<sup>8</sup> The Climate Registry Mission, <http://www.theclimateregistry.org/about/mission/>, accessed on August 30, 2012.

<sup>9</sup> National Highway Traffic Safety Administration, CAFE – Fuel Economy, <http://www.nhtsa.gov/fuel-economy>, accessed on September 6, 2012.

<sup>10</sup> California Air Resources Board Glossary of Air Pollution Terms, <http://www.arb.ca.gov/html/gloss.htm>, accessed on August 30, 2012.

<sup>11</sup> California Air Resources Board Glossary of Air Pollution Terms, <http://www.arb.ca.gov/html/gloss.htm>, accessed on August 30, 2012.

**Gross vehicle weight rating**

The weight specified by the manufacturer as the loaded weight of a single vehicle. The loaded weight of the vehicle includes passengers, options, and cargo.<sup>12</sup>

**Heavy duty vehicle**

Any motor vehicle (including buses) having a gross vehicle weight rating of greater than 8,500 pounds, or curb weight of more than 6,000 pounds, or a basic vehicle frontal area in excess of 45 square feet.<sup>13</sup>

**Metric ton of carbon dioxide equivalent**

A metric measure used to compare the emissions from various GHGs based upon their global warming potential. Carbon dioxide equivalents are commonly expressed as "metric tons of carbon dioxide equivalents (MTCO<sub>2</sub>E)."

**“Pavley” standards**

The Pavley law or standards are the common name for the 2002 Assembly Bill (AB) 1493 containing regulations to reduce GHGs from passenger vehicles.<sup>14</sup> Initially, the US EPA reviewed and then denied California’s request to implement the Pavley regulations. As of 2009, California was granted the authority to implement the Pavley regulations.

**Renewable portfolio standard (RPS)**

A regulation requiring utility companies in California to increase the production of renewable energy from solar, wind, or biomass, or geothermal sources.<sup>15</sup>

**Service Population**

Within a particular area, the service population would be the group of people eligible to receive or have access to a particular service or utility.

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<sup>12</sup> US Environmental Protection Agency Importing Vehicles and Engines into the US Glossary: Terms and Acronyms, <http://www.epa.gov/oms/imports/glossary.htm#hdvhd>, accessed on August 30, 2012.

<sup>13</sup> US Environmental Protection Agency Importing Vehicles and Engines into the US Glossary: Terms and Acronyms, <http://www.epa.gov/oms/imports/glossary.htm#hdvhd>, accessed on August 30, 2012.

<sup>14</sup> California Air Resources Board Clean Car Standards – Pavley, Assembly Bill 1493, <http://www.arb.ca.gov/cc/ccms/ccms.htm>, accessed on September 6, 2012.

<sup>15</sup> City of Santa Rosa, 2012, *Climate Action Plan*, page 7-3.

### **Sphere of influence (SOI)**

A planning tool used by cities to identify the potential future municipal boundary. In most cases, the SOI includes the area just beyond a city's boundary and includes territory and neighborhoods surrounding the city. An SOI allows cities to plan in cooperation with other agencies for public services such as police, fire, parks, roads, and flood control. LAFCOs designate SOIs based on the identification of the probable ultimate boundaries of each city.

### **Stationary sources**

Non-mobile sources such as power plants, refineries, and manufacturing facilities which emit air pollutants.<sup>16</sup>

### **Sustainability**

Based on a simple principle: Everything that we need for our survival and well-being depends, either directly or indirectly, on our natural environment. Sustainability creates and maintains the conditions under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic and other requirements of present and future generations. Sustainability is important to making sure that we have and will continue to have; the water, materials, and resources to protect human health and our environment.<sup>17</sup>

### **Sustainable communities' strategy (SCS)**

The land use element of each MPO's Regional Transportation Plan as required by SB 375. The SCS will demonstrate how the region will achieve the 2020 and 2035 VMT and GHG reduction targets for the region set by CARB.<sup>18</sup>

### **Urban growth boundary**

A regulatory line drawn around a city, county, or metropolitan area, outside of which little or no development can occur within a given time frame, usually 20 to 30 years.<sup>19</sup>

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<sup>16</sup> California Air Resources Board Glossary of Air Pollution Terms, <http://www.arb.ca.gov/html/gloss.htm>, accessed on August 30, 2012.

<sup>17</sup> US Environmental Protection Agency Sustainability Basic Information, <http://www.epa.gov/sustainability/basicinfo.htm>, accessed on August 30, 2012.

<sup>18</sup> City of Santa Rosa, 2012, *Climate Action Plan*, page 7-9.

<sup>19</sup> Association of Bay Area Governments Urban Growth Boundaries and Urban Limit Lines, <http://www.abag.ca.gov/jointpolicy/Urban%20Growth%20Boundaries%20and%20Urban%20Limit%20Lines.pdf>, accessed on August 30, 2012.

### **Urban sprawl**

The extension of low-density residential, commercial, and industrial development into areas beyond a city's boundaries that occurs in an unplanned or uncoordinated manner.<sup>20</sup>

### **Vehicle miles traveled (VMT)**

The miles traveled by motor vehicles over a specified length of time (e.g., daily, monthly, or yearly) or over a specified road or transportation corridor.<sup>21</sup>

### **Vinyl chloride**

A colorless gas which burns easily and is not stable at high temperatures. It has a mild, sweet odor. It is a manufactured substance that does not occur naturally. It can be formed when other substances such as trichloroethane, trichloroethylene, and tetrachloroethylene are broken down. Vinyl chloride is used to make polyvinyl chloride (PVC). PVC is used to make a variety of plastic products, including pipes, wire and cable coatings, and packaging materials. Vinyl chloride is also known as chloroethene, chloroethylene, and ethylene monochloride.<sup>22</sup>

## **ACRONYMS**

ABAG	Association of Bay Area Governments
ADC	Alternative daily cover
ARRA	American Recovery and Reinvestment Act of 2009
BAAQMD	Bay Area Air Quality Management District
BCDC	Bay Area Conservation and Development Commission
Cal/EPA	California Environmental Protection Agency
CARB	California Air Resources Board
CARE	Community Action for a Renewed Environment
CEC	California Energy Commission
ECAS	Energy and Conservation Action Strategy

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<sup>20</sup> National Oceanic and Atmospheric Association State of the Coast, Urban Sprawl, <http://stateofthecoast.noaa.gov/population/urbansprawl.html>, accessed on August 30, 2012.

<sup>21</sup> California Air Resources Board Glossary of Air Pollution Terms, <http://www.arb.ca.gov/html/gloss.htm>, accessed on August 30, 2012.

<sup>22</sup> Centers for Disease Control and Prevention, Agency for Toxic Substances and Disease Registry, Toxic Substances Portal – Vinyl Chloride, <http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=281&tid=51#bookmark02>, accessed on August 30, 2012.

CITY OF VACAVILLE  
ENERGY AND CONSERVATION ACTION STRATEGY  
GLOSSARY AND ACRONYMS

EPA	US Environmental Protection Agency
FTA	Federal Transit Administration
GHG	Greenhouse gas
GWP	Global Warming Potential
LCFS	Low Carbon Fuel Standard
LGOP	Local Government Operation Protocol
MTCO <sub>2e</sub>	Metric tons of carbon dioxide equivalents
MTC	Metropolitan Transportation Commission
PG&E	Pacific Gas & Electric
PMT	Passenger miles traveled
SCS	Sustainable communities' strategy
SRTS	Safe Routes to School
STA	Solano Transportation Authority
TE	Transportation Enhancements
TIFIA	Transportation Infrastructure Finance and Innovation Act
TIGER	Transportation Investment Generating Economic Recovery
UPT	Unlinked passenger trip
USDOT	US Department of Transportation
VMT	Vehicle miles traveled
YSAQMD	Yolo Solano Air Quality Management District