

Appendix A: Glossary of Terms

Active transportation: This is a non-motorized form of transportation, primarily made up of walking and bicycling.

Activity-based emissions: GHG emissions that are quantified based on activity data (e.g., energy usage) in conjunction with an emission factor (e.g., MTCO_{2e}/kWh).

Adjusted business-as-usual (ABAU) forecast: The influence of federal, statewide, and regional policies (e.g., Pavley Clean Car Standards) will have on the City's projected emissions.

Business-as-usual (BAU) forecast: A GHG emissions scenario that is based on the assumption that no mitigation policies or measures will be implemented beyond those that are already in progress that can serve to highlight the level of emissions that would occur without further policy effort.

CALGreen: The California Green Building Standards Code, Title 24, Part 11, of the California Code of Regulations. It encourages sustainable construction practices in building planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality.

Carbon dioxide equivalent (CO_{2e}): A metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential (GWP), or potency. Carbon dioxide equivalents are commonly expressed as "million metric tons of carbon dioxide equivalents (MMTCO_{2E}).” The carbon dioxide equivalent for a gas is derived by

multiplying the tons of the gas by the associated GWP. For example, the GWP for methane is 24.5. This means that one million metric tons of methane is equivalent to 24.5 million metric tons of carbon dioxide.⁴⁴

Carbon neutrality: The balance between carbon emissions and carbon absorption from the atmosphere.

Carbon sequestration: The process of capturing and storing carbon dioxide from the atmosphere.

Climate change: Climate change refers to changes in the average and/or the variability of temperature, rainfall, and extreme weather that persist for an extended period

Climate hazard: Short or long-term climate events that have the potential to cause damage or harm to humans and natural systems. These include meteorological, climatological, hydrological, geophysical or biological events.

Co-benefit: Non-greenhouse gas-related benefits of climate actions. Measuring co-benefits examines how climate action is interrelated with and delivers outcomes for provision of basic services, health, prosperity and other sustainable development agendas.

Community solar: A solar power project where the energy and benefits of that project go towards multiple energy customers (e.g., individuals, businesses, nonprofits).

Complete neighborhood: A neighborhood where residents can reach community amenities (e.g., grocery stores and retail), public facilities

⁴⁴ U.S. Environmental Protection Agency. Climate Change. <https://www.epa.gov/climatechange/glossary.html>

(e.g., parks and community centers) and services (e.g., health care and affordable childcare) within a 15-minute walk

Complete streets policies: Policies that address the safe accommodation of all users, including bicyclists, pedestrians, motorists, freight, public transit vehicles and riders, children, the elderly, and the disabled.

Consumption-based emissions: GHG emissions that account for the direct and indirect emissions resulting from the full lifecycle of a good or service. This includes those from production, pre-purchase transportation, wholesale and retail, use, and post-consumer disposal.⁴⁵

Decarbonization: Process of reducing embodied or operational GHG emissions. Typically refers to a reduction of the carbon emissions associated with energy consumption, industry and transportation. The intention to decarbonize the electric power grid is often referred to as Grid Decarbonization.

Disadvantaged community (DAC): According to California's Health and Safety Code (Section 39711), a disadvantaged community is defined as "a low-income area that is disproportionately affected by environmental pollution and other hazards that can lead to negative health effects, exposure, or environmental degradation." For the purposes of the Petaluma General Plan Update, "disadvantaged communities" are referred to as "Equity Priority Areas."

Ecosystem services: The benefits that people and society derive from natural ecosystems, such as carbon sequestration, pollination, and stormwater filtration.

Electrification: The process of transitioning away from technologies that use fossil fuels to technologies that use electricity. Electrification of

systems paired with a power grid with 100% renewable energy sources can significantly reduce GHG emissions.

Embodied carbon: (See Consumption-based emissions).

Emissions inventory: A quantified list of a city's GHG emissions and sources.

Energy conservation: Using less energy. Ways to reduce energy waste include turning off lights, heating, and motors when not needed.

Energy efficiency: Doing the same or more work with less energy. Ways to increase energy efficiency include replacing incandescent light bulbs with compact fluorescent light bulbs or buying an Energy Star appliance to use less energy for the same or greater output.

Equity: The absence of avoidable or remediable differences among groups of people, whether those groups are defined socially, economically, demographically or geographically. As opposed to the concept of equality where everyone is given equal access, equity provides proportional access to redress historical and current disparities and ensure the same level of opportunity for all.

Greenhouse gases (GHG): Gases within the atmosphere that accelerate the warming of the Earth and are released from human activities that burn fossil fuels or from historic carbon sinks, such as melting permafrost.

Greywater: The water generated from buildings that is not contaminated (e.g., sinks, dishwashers).

Greywater systems: This system collects domestic, uncontaminated wastewater and reuses it for irrigation or toilet flushing. Sources

⁴⁵ Urban Sustainability Directors Network. Sustainable Consumption Toolkit.
<https://sustainableconsumption.usdn.org/initiatives-list/estimating-consumption-related-emissions>

of greywater include sinks, showers, washing machines, and dishwashers.

Micromobility: Small, fully motorized or motor-assisted devices such as e-scooters and e-bikes. Includes privately owned and shared-use station-based or dockless fleets.

Mobility hub: A place that connects different travel options including public transit, micromobility, rideshare, and walking.

Mode shift: The transition from using one habitual form of travel, or mode, to another. Transportation modes include mass transit, non-motorized transit and automobiles.

Mode share: A number or percentage of users or trips, using a particular type of transportation such as driving a single-occupancy vehicle, carpooling, riding public transit, walking or cycling.

Pacific Gas and Electric (PG&E): Investor-owned utility that provides natural gas and electric service to Central and Northern California. PG&E is also responsible for maintaining the electrical grid infrastructure.

Reach code: A local building energy code that sets targets beyond the state requirements for energy use or energy efficiency.

Rideshare: Multiple passengers travelling in a private vehicle. Includes carpooling and vanpooling, as well as apps that match travelers for individual trips.

Shared parking: A type of parking management where parking spaces or facilities are shared by more than one user. Parking can be shared by

adjacent property owners (on-site) or a district (off-site).

Sonoma Clean Power (SCP): Community Choice Aggregator that provides electric generation service to cities and unincorporated areas in Mendocino and Sonoma County. SCP electricity is from cleaner sources with lower greenhouse gas emissions than PG&E.

Transportation Demand Management (TDM): Strategies to change travel behavior in order to reduce traffic congestion, increase safety and mobility and conserve energy and reduce greenhouse gas emissions. Strategies may include ridesharing, telecommuting, park-and-ride programs and alternative work schedules.

Transit-oriented communities (TOC): Communities that enable people to access and use transit more often for more types of trips by centering housing, jobs, services and shopping around public transit.

Vehicle miles traveled (VMT): A measurement of miles traveled by vehicles within a specified area for a specified time period.

Unbundled parking: The practice of selling or leasing parking spaces separately from the purchase or lease of the commercial or residential use.

Zero-emission vehicle (ZEV): Vehicles that produce no tailpipe emissions. Generally, ZEVs feature electric powertrains either from a battery or a hydrogen fuel cell. ZEVs may still be responsible for some greenhouse gas emissions, if the GHG content from the electricity generation comes from fossil fuel sources.