

Carbon Offset Program Technical Conference: Useful Vocabulary

<i>Greenhouse Gas (GHG)</i>	A gas that contributes to the greenhouse effect by absorbing infrared radiation, e.g., carbon dioxide (CO ₂), Methane (CH ₄), or Nitrous Oxide (N ₂ O). (Oxford)
<i>Global Warming Potential (GWP)</i>	The heat absorbed by any greenhouse gas in the atmosphere, as a multiple of the heat that would be absorbed by the same mass of carbon dioxide (CO ₂). According to the Intergovernmental Panel on Climate Change 4 th Assessment Report (IPCC AR4), methane has a GWP of 25 over a 100-year span. This means that 1 metric ton of methane absorbs as much heat as 25 metric tons of carbon dioxide over 100 years. The California Air Resource Board has summarized IPCC AR4 GWP factors here: https://ww2.arb.ca.gov/ghg-gwps .
<i>Carbon Dioxide Equivalent (CO₂e)</i>	Greenhouse gases are converted into a Carbon Dioxide Equivalent value using 100-year GWP factors. For example, 1 metric ton of methane would equate to 25 metric tons of CO ₂ e based on IPCC AR4 Global Warming Potentials.
<i>Carbon Offset</i>	Sometimes referred to as Offsets or Credits - GHG reductions and removals which are equal to one metric ton of carbon dioxide equivalent (CO ₂ e) that are used to offset emissions elsewhere. Different registries may use different names for issued credit units. For example, the Climate Action Reserve calls carbon offsets Climate Reserve Tonnes (CRTs) while the American Carbon Registry calls carbon offsets Emission Reduction Tonnes (ERTs). CRTs and ERTs both represent one metric ton of CO ₂ e reduced.
<i>Carbon Offset Registry</i>	An entity that develops standards, protocols, and requirements to support integrity and transparency in carbon offset markets. The Climate Action Reserve (CAR) and the American Carbon Registry (ACR) are examples of carbon offset registries.
<i>Protocol or Standard</i>	A set of requirements for a specific type of carbon offset project that must be met in order to be registered and produce credits on a carbon offset registry.
<i>Carbon Offset Project</i>	A specific activity that reduces or mitigates greenhouse gas emissions. To be registered on a carbon offset registry, a project must comply with an approved Protocol (CAR) or Standard (ACR).
<i>Ex Post</i>	Carbon offsets are issued only on an ex post basis (i.e., after verification that reduction activities have actually occurred).
<i>Verifier</i>	Carbon Offset Registries require 3 rd party verification of all carbon offset projects. 3 rd party verifiers ensure compliance with the applicable protocol or standard and accurate measurement and reporting of GHG emission reductions.
<i>Intergovernmental Panel on Climate Change</i>	The United Nations body for assessing the science related to climate change. Author of the Assessment Report 4 which has become an industry standard source of Global Warming Potentials and is used by carbon offset registries to establish CO ₂ e reductions.
<i>Additionality</i>	The concept that a carbon offset project should be additional to what would occur in the absence of carbon offset markets. In other words, without carbon offset market incentives the project would not be viable.
<i>Compliance Market</i>	A regulated market in which law requires GHG emission reductions. Carbon offset purchases can be used to fulfill legal obligation. E.g. California cap-and-trade.
<i>Voluntary Market</i>	A market in which no legal mandate requires GHG emission reductions. Carbon offset purchases are voluntary.