

# GLOSSARY OF TERMS

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Source: California Market Advisory Committee Report (Draft June 2007)

**Additionality:** Emissions reductions achieved through a given project over and above those that would otherwise have occurred in the absence of the project under a business-as-usual scenario. Additionality is a criterion for approval of project-based activities under the Clean Development Mechanism of the Kyoto Protocol as well as for offset projects allowed for credit under emissions trading programs.

**Allocation:** The process by which emissions allowances are initially distributed under an emissions cap and trade system. Authorizations to emit can initially be distributed in a number of ways. See auctioning, benchmarking, grandfathering, and updating.

**Allowance:** A government issued authorization to emit a certain amount. In greenhouse gas markets, an allowance is commonly denominated as one ton of CO<sub>2</sub>e per year. See also “permit” and “credits (a.k.a. carbon credits).” The total number of allowances allocated to all entities in a cap and trade system is determined by the size of the overall cap on emissions.

**Auctioning:** A method for distributing emission allowances in a cap and trade system whereby allowances are sold to the highest bidder. This method of allocation may be combined with other forms of allowance allocation.

**Banking:** The carry-over of unused allowances or offset credits from one compliance period to the next.

**Baseline:** The target, usually the historical emissions from a designated past year, against which emission reduction goals are measured. In California, the designated base year is 1990.

**Benchmarking:** An allowance allocation method in which allowances are distributed by setting a level of permitted emissions per unit of input or output.

**Borrowing:** A mechanism under a cap and trade program that allows covered entities to use allowances designated for a future compliance period to meet the requirements of the current compliance period. Borrowing may entail penalties to reflect the programmatic preference for near-term emissions reductions.

**Cap and Trade:** A system designed to limit and reduce emissions. Cap and trade regulation creates a single market mechanism as opposed to a command and control approach that prescribes reductions on a source-by-

source basis. Cap and trade regulation sets an overall limit on emissions and allows entities subject to the system to comply by undertaking emission reduction projects at their covered facilities and/or by purchasing emission allowances (or credits) from other entities that have generated emission reductions in excess of their compliance obligations.

**Carbon Tax:** A surcharge on the carbon content of fossil fuels that aims to discourage their use and thereby reduce carbon dioxide emissions.

**Command and Control:** A system of regulation that prescribes emission limits and compliance methods on a facility-by-facility or source-by-source basis and that has been the traditional approach to reducing air pollution.

**Emissions Cap:** A mandated constraint in a scheduled timeframe that puts a "ceiling" on the total amount of anthropogenic greenhouse gas emissions that can be released into the atmosphere.

**Emissions trading:** The process or policy that allows the buying and selling of credits or allowances created under an emissions cap.

**European Union Emissions Trading Scheme (EU ETS):** The world's largest greenhouse gas emissions trading system is the European Union's Emissions Trading Scheme, which limits CO<sub>2</sub> emissions from 12,000 facilities in the 25 EU member states. Launched in 2005, the ETS covers electricity and major industrial sectors (including oil, iron and steel, cement, and pulp and paper) that together produce nearly half the EU's CO<sub>2</sub> emissions. ETS rules are set at the regional level but decisions on emission allowance allocation are left to member states. An initial phase runs through 2007; a second will coincide with the Kyoto Protocol compliance period (2008-2012). Excess emissions incur a penalty (100 Euros/ton in phase II) and must be made up in the next phase. EU policymakers have said the ETS will continue beyond 2012 with or without new international climate agreements.

**Grandfathering:** A method by which emission allowances are freely distributed to entities covered under an emissions trading program based on historic emissions.

**Leakage:** Leakage occurs when activities that reduce greenhouse gas emissions (or increase carbon in plants and soils) in one place and time result in increases of emissions (or loss of soil or plant carbon) elsewhere or at later times. For example, a steel firm in a country covered by the Kyoto Protocol makes reductions by closing one facility and replacing its output with production from a steel plant operating in another country that does not have a GHG constraint. Similarly, a forest can be protected in one location and cause harvesting of forests elsewhere.

**Linking:** Authorization by the regulator for entities covered under a cap and trade program to use allowances or offsets from a different jurisdiction's regulatory regime (such as another cap and trade program) for compliance purposes. Linking may expand opportunities for low-cost emission reductions, resulting in lower compliance costs.

**Load-based system:** A system in which the covered emitters are electricity retailers responsible for all the emissions associated with the generation of the electricity that they provide to customers, including electricity imported from other states.

**Offset:** Projects undertaken outside the coverage of a mandatory emissions reduction system for which the ownership of verifiable GHG emission reductions can be transferred and used by a regulated source to meet its emissions reduction obligation. If offsets are allowed in a cap and trade program, credits would be granted to an uncapped source for the emissions reductions a project (or plant or soil carbon sink) achieves. A capped source could then acquire these credits as a method of compliance under a cap.

**Regional Greenhouse Gas Initiative (RGGI):** The Regional Greenhouse Gas Initiative (RGGI) is establishing the first mandatory U.S. cap and trade program for carbon dioxide, and currently includes ten Northeastern and mid-Atlantic states. The governors of Connecticut, Delaware, Maine, New Hampshire, New Jersey, New York, and Vermont established RGGI in December 2005. Massachusetts, Maryland and Rhode Island joined in early 2007. Additional states can join the program with the agreement of the participating states. RGGI sets a cap on carbon dioxide emissions from power plants and allows sources to trade emission allowances. The program will cap emissions at current levels in 2009 and then reduce emissions 10% by 2019. Each state that intends to participate in RGGI must adopt a model rule through legislation or regulation and determine how to distribute emissions allowances. Member states agree to set aside at least 25% of their emission allowances for public benefit.

**Registries, registry systems:** Electronic databases that track and record emissions and emission allowance holdings, retirements, cancellations and transfers.

**Source-based (downstream) system:** Also known as a downstream system, a source-based cap and trade system is one in which the point of regulation coincides with the point of emission of covered greenhouse gases. Examples of a source-based approach include the Regional Greenhouse Gas Initiative's cap on power plant CO<sub>2</sub> emissions or the cap on large industrial sources in the European Union's Emissions Trading Scheme.

**Updating:** A form of allowance allocation in which allocations are reviewed and changed over time and/or

awarded on the basis of changing circumstances (such as output) rather than historical data (such as emissions, input or output). For example, allowances might be distributed based on megawatt-hours generated or tons of a product manufactured.

**Upstream system:** An upstream approach to a cap and trade system matches the point of regulation with the point of entry of fossil fuels into commerce within the covered region.

**Verification:** The act of checking or testing, by an independent and certified party, to ensure that an emission reduction project actually achieves emission reductions commensurate with the credits it receives.