



## Appendix F: Green-e® Renewable Fuels Glossary

The Green-e® Renewable Fuels Glossary (“Glossary”) provides definitions to certain terms used in documentation pertaining to the Green-e® Renewable Fuels program developed and administered by Center for Resource Solutions (“Center” or “CRS”). This Glossary is incorporated by reference into the Certification and Logo Use Agreements for Green-e® Renewable Fuels Certification.

Baseline Emissions	An estimate of GHG emissions, removals, or storage associated with a baseline scenario or derived using a performance standard.
Baseline Scenario	A hypothetical description of what would most likely have occurred in the absence of any considerations about climate change.
Biogas	Biogas is a mixture of gases made from the decomposition of organic material. It consists mainly of methane and carbon dioxide, with varied amounts of hydrogen sulfide, ammonia, siloxanes, and trace amounts of other gases.
Biological Carbon Sequestration	The uptake and storage of CO <sub>2</sub> by plants and organisms.
Biological Carbon Stocks	The carbon contained in identified forest biomass categories, such as above and below ground biomass, at a specific point in time.
Biomethane	Biomethane (also called Renewable Natural Gas [RNG]), is biogas that has been cleaned and upgraded to meet gas pipeline purity specifications. The remaining high-BTU gas is predominantly methane (over 94%), and once upgraded to pipeline quality standards, it may blend or be used interchangeably with fossil fuel–derived natural gas.
Book-and-Claim	The book-and-claim system of accounting refers to a chain-of-custody model in which RFCs are used to represent the transfer and ownership of renewable fuel.
Bundled Gas	A gas product that is sold together with the associated RFCs.
Business-as-Usual	A baseline or status quo scenario.
Carbon Dioxide Equivalent (CO <sub>2</sub> e)	The common unit of measurement for Greenhouse Gases that reflects the different Global Warming Potential of different greenhouse gases.

Carbon Intensity (CI)	The amount of GHGs emitted by the production of a unit gas. CI calculation methodologies may also include some or all of the gas delivery process and gas combustion in their calculation scope.
Carbon Offset	A reduction of greenhouse gases measured in tons of carbon dioxide avoided, sequestered or destroyed.
Certification	The independent verification and provision of quality assurances for a product or service relative to a standard or set of requirements.
Common Carrier Pipeline	A pipeline that provides gas transportation services to the general public under a standard set of requirements.
Common Practice	The predominant technology(ies) implemented or practice(s) undertaken in a particular region or sector.
Concentrated Animal Feeding Operation (“CAFO”)	A farming facility that confines a certain number of animals. For a full definition and how CAFOs are treated in the Green-e® Renewable Fuels program, see Section I.D of the Green-e® Renewable Fuels Standard.
Dekatherm	Unit of energy that measures the heating value of natural gas. Equal to one million British thermal units (Btu)
Deregulated Utility Markets	Competitive markets (including electricity and gas) where consumers have a choice of which company they may purchase their electricity or gas from. The opposite of a regulated or monopoly market for these services.
Digestate	Material that is produced as a byproduct of anaerobic digestion.
Double Claiming	A situation in which more than one end-user claims the same environmental attributes associated with the RFC.
Double Counting	A situation in which the same environmental attributes associated with the RFC is counted more than once in any of the following: a registry, towards a regulatory or voluntary target, by an end user.
Double Issuance	A situation in which an attribute or benefit is credited or issued more than once or to more than one party at the time of issuance or along a transaction chain
Double Sale	A situation in which the same RFC and the associated environmental attributes are sold to more than one party, resulting in a situation of double claiming or double counting.
Emissions Categories (Scopes)	See World Resources Institute for definition
Feedstock	Any raw or unprocessed material from which renewable fuels are derived.

Fossil Fuel Resources	Conventional electricity generation using natural gas, oil, coal, or petroleum coke or other petroleum-based fuels.
Fossil Natural Gas	A "fossil fuel" methane gas extracted from the earth. As opposed to synthetic methane (which may be derived from fossil fuels) or biomethane.
Gas Utility	In a regulated gas market, the entity that owns and/or operates facilities for the generation, transmission, and/or distribution of gas. In a deregulated market, this entity becomes an gas distribution company responsible for transmission and distribution only.
Green-e® Governance Board (The Board)	An independent body with primary responsibility for the oversight of all Green-e® Programs.
Green-e® Logo	This is a registered certification mark, owned by the Center for Resource Solutions. The logo represents that a renewable energy product or carbon offset option is certified, or that a purchaser of these products has met minimum Green-e® Marketplace usage requirements. (See definition of "Certification.") Only participants in the Green-e® programs and having contracts with the Center may use the logo. The logo must be used in the manner described in relevant Green-e® Program's Code of Conduct and/or the "Green-e® Logo Use Guidelines."
Greenhouse Gas (GHG)	Gases that trap heat in the atmosphere and are emitted through natural processes and human activities. These gases have been determined by the Intergovernmental Panel on Climate Change (IPCC) to have a radiative forcing effect on the atmosphere, including but not necessarily limited to the six principal GHGs included in the Kyoto Protocol: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride (CO2, N2O, CH4, HFCs, PFCs and SF6).
Historical Product Content Label	A primary disclosure document required for all sales of Green-e® Renewable Fuels certified renewable fuels and RFC products. This document contains information about the certified product, including the actual mix of resources sold to the customer, which is independently verified through the Green-e® Renewable Fuels program.
Leakage	An indirect and/or unanticipated change in GHG emissions or carbon stocks occurring outside of the project's accounting boundary as a result of the project.
Marketing Compliance Review	A twice-annual evaluation of marketing, disclosure, and enrollment materials used for the Green-e® certified product against the requirements of the Code of Conduct.

Million British Thermal Unit (MMBtu)	Unit of heat to measure heat content or energy value. One Btu is defined as the amount of heat required to raise the temperature of one pound of water by one degree Fahrenheit.
Natural Gas Pipeline System	The physical infrastructure of pipelines that connect the production, storage, end-users of natural gas.
Participant	Entities entering into a Green-e® certification agreement with the Center for Resource Solutions for the sale or use of a certified renewable fuel product. Participants may be renewable fuel producers, sellers of renewable fuels or RFCs, purchasers of renewable fuel or RFCs, or entities undertaking other means of procuring, transacting, or consuming renewable fuel. Participants must have one or more certification contracts with CRS and maintain compliance with the program's requirements in order to gain and maintain their Green-e® certification.
Pathway	A fuel pathway is a specific combination of: (1) feedstock, (2) production process, and (3) fuel type 1
Price, Terms & Conditions	A primary disclosure document required for all sales of Green-e® certified products. The Price, Terms & Conditions requirements are listed in the program's respective Code of Conduct. See "Green-e® Renewable Fuels Code of Conduct"
Private Pipeline	In contrast to a common carrier pipeline, owned by private entities for internal use.
Product	The renewable fuel or RFC that a Participant sells to customers.
Product Content Label	Much like a nutrition label, the product content label includes critical information about the composition and details of the renewable fuels product so that a potential customer can make an informed decision about the purchase.
Production Facility	A facility that produces biogas by conversion of a feedstock. Upgrading the biogas into biomethane may take place at the same facility, or in another.
Prospective Product Content Label	A primary disclosure document required for all sales of Green-e® Renewable Fuel certified products, containing information about the certified product. The delivery and contents of the label is monitored by CRS staff.

Tracking System	Tracking systems are databases, typically electronic, with basic information about each unit of renewable energy generated in the region. Electronic tracking systems allow RECs/RFCs to be transferred among account holders much as in online banking. A tracking system can be used by regulators as a registry of generating facilities, as a means of verifying compliance with a quota system, for aiding in the creation of disclosure labels, and for other purposes such as verifying wholesale supply for green power products.
Renewable Fuel Certificate (“RFC”)	A contractual instrument that represents and conveys all attributes of a unit of renewable fuel from production until delivery to a renewable fuel consumer. Such attributes may include, but are not limited to: the feedstock and production process used; the renewable fuel type; the location of the production; the time of production; the air emissions associated with production, transport, and leakage (i.e. the Carbon Intensity); all other legally available environmental benefits of production through delivery; greenhouse gas avoidance, destruction, offsetting and other benefits; and all other information relevant to using and claiming the benefits of production. RFCs are created when renewable fuel is injected into a pipeline (or other point for customer use) for later consumption and are denominated in the same units (e.g., MMBtu, dekatherm, gigajoules) as the associated fuel produced. Total benefits and impacts include those that occur until the point of customer RFC use. RFCs facilitate tracking, transacting, and using renewable energy fuels. RFCs may be transacted separately from energy or fuels.
Renewable Portfolio Standard	A state or federal level policy that requires that a minimum amount (usually a percentage) of supply provided by each supply company is to come from renewable energy. The Green-e® Renewable Fuels program does not certify products that are counted toward a state RPS.
Reporting Year	The year-long period over which sales of Green-e® certified products are reported to CRS for verification. Historically, the reporting year has been the calendar year of sales or delivery. Specific Reporting Years are specified in Green-e® Verification materials.
Retirement	Retirement occurs when an RFC is used. Once an RFC is retired, it may not be sold, donated, or transferred to any other party. No party other than the owner may make claims associated with retired RFC.
Transfer	An exchange of ownership from one party to another party. This may occur in a registry account or in a tracking system
Unbundled RFC	An RFC product separated from the associated underlying gas commodity
Verification	Annual process of checking supply matches sales of eligible resources and that customer expectations have been met.

Verification Report	A report prepared by an independent third party entity, pursuant to a verification, which reports the findings of the verification process.
Vintage	The date or time period that biomethane was injected into the common carrier pipeline or delivered to the customer if not injected into a pipeline.
Voluntary Renewable Energy Market	The Voluntary Market refers to purchases of renewable energy that are made above and beyond the minimum amounts required by law.
Wholesale Product	Products sold to a customer that will resell the commodity. This is opposed to a retail customer who keeps or retires the commodity in order to make claims about purchase.