

WHAT IS CARBON DIOXIDE?

Carbon dioxide (CO₂) is a chemical compound containing one carbon (C) and two oxygen (O) atoms. CO₂ is a colorless, odorless, tasteless, non-flammable gas. When chilled to -109.3° F, it can also become solid, and is commonly known as dry ice.



CO₂ is exhaled by humans and animals, released whenever anything burns or decomposes, used to carbonate sodas and decaffeinate coffee and tea, as a coolant (dry ice), and in fire extinguishers.

In a natural process called the carbon cycle, carbon, in the form of CO₂, is exchanged between plants, animals, and the Earth.

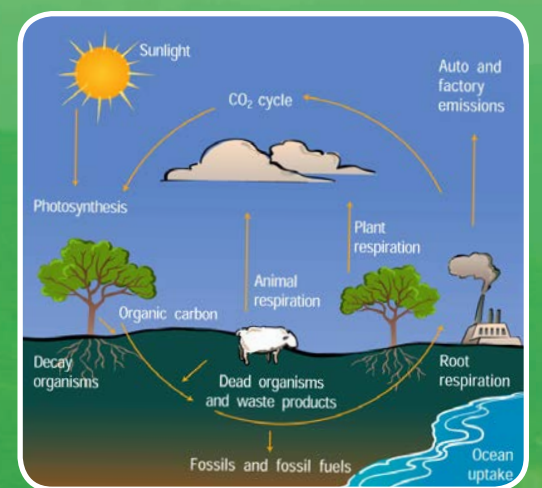


Image courtesy of UCAR



Carbon dioxide is regularly transported by pipeline, tanker truck, and rail for food and industrial grade use. CO₂ transport for geologic storage will be accomplished in the same manner.

Carbon dioxide is essential to plant life and helps create the greenhouse effect that keeps our planet livable.



Scientific studies have shown CO₂ to be a “greenhouse gas” and contributor to global climate change when introduced in the atmosphere in unnaturally large amounts, such as from the transportation sector and from coal and natural gas power plants. Some of this excess CO₂ can be captured, transported, and used to extract oil and gas from natural reservoirs that were once thought to be depleted. The Virginia Center for Coal and Energy Research (VCCER) research project, Injecting Carbon Dioxide into Unconventional Reservoirs, will evaluate whether the CO₂ can be permanently and safely stored in the depleted reservoirs.