

A2

Glossary

Ammonia (NH₃): A compound of nitrogen and hydrogen. It can be used directly as a fuel in direct combustion process, and in fuel cells or as a hydrogen carrier. To be a low-carbon fuel, ammonia must be produced from low-carbon hydrogen, the nitrogen separated via the Haber process, and electricity needs are met by low-carbon electricity.

Anthropogenic global warming: Overall warming of Earth's climate caused or produced by humans.

Bioenergy: Energy content in solid, liquid, and gaseous products derived from biomass feedstocks and biogas. It includes solid biomass, liquid biofuels, and biogases.

Biogas: A mixture of methane, carbon dioxide, and small quantities of other gases produced by anaerobic digestion of organic matter in an oxygen-free environment.

Carbon capture, utilisation, and storage (CCS or CCUS): The process of capturing CO₂ emissions from fuel combustion, industrial processes, or directly from the atmosphere. Captured CO₂ emissions can be stored in underground geological formations, onshore or offshore, or used as an input or feedstock to create products.

Clean energy: Includes renewables, energy efficiency, low-carbon fuels, nuclear power, battery storage and carbon capture, utilization, and storage.

Concentrating solar power (CSP): Solar thermal power/electric generation systems that collect and concentrate sunlight to produce high temperature heat to generate electricity.

Geothermal: Geothermal energy is heat derived from the sub-surface of the earth. Water and/or steam carry the geothermal energy to the surface. Depending on its characteristics, geothermal energy can be used for heating and cooling purposes or be harnessed to generate clean electricity if the temperature is adequate.

Heating degree day (HDD): A measurement designed to reflect the demand for energy needed to heat building. Heating degree days are defined relative to a base temperature. The base temperature is usually an indoor temperature (between 18°C and 20°C) which is adequate for human comfort. If the outside air temperature is lower, then there is a heating requirement. The heating requirements for a given structure are considered to be directly proportional to the number of HDD at that location. A similar measurement, cooling degree day (CDD), reflects the amount of energy used to cool a building.

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Natural gas: Comprises gases occurring in deposits, whether liquefied or gaseous, consisting mainly of methane. It includes both 'non-associated' gas originating from fields producing hydrocarbons only in gaseous form and 'associated' gas produced in association with crude oil as well as methane recovered from coal mines (colliery gas).

Off-grid systems: Stand-alone systems for individual households or groups of consumers.

Offshore wind: Refers to electricity produced by wind turbines that are installed in open water, usually in the ocean.

Renewables: Includes bioenergy, geothermal, hydropower, solar photovoltaics (PV), concentrating solar power (CSP), wind and marine (tide and wave) energy for electricity and heat generation.

Solar photovoltaic (PV): Electricity produced from solar photovoltaic cells.

Variable renewable energy (VRE): Refers to technologies whose maximum output at any time depends on the availability of fluctuating renewable energy resources. VRE includes a broad array of technologies such as wind power, solar PV, run-of-river hydro, concentrating solar power (where no thermal storage is included) and marine (tidal and wave).