

Carbon Neutrality Glossary

ENGIE Solutions
October 2020



ENGIE
Solutions

Contents

Carbon Neutrality

A

Acidification
ADEME
Adiabatic power plant
Anthropogenic greenhouse gas emissions
As-a-service
As-a-service carbon-free mobility

B

B Corp certification
Bilan Carbone®
BIM
Bioclimatism
Biodiversity
Biofuel
Biofuels
Biogas
Biomass
Biomass boiler
Biomethane
Bio-based materials
Biotope
Boiler plant
BREEAM certification
Building Decarbonisation
Building energy performance
Building greening
Building reversibility

C

Car fleet greening
Carbon calculator / carbon footprint calculator
Carbon content (electricity, gas, renewables)
Carbon credit
Carbon footprint
Carbon neutrality
Carbon offsetting / Carbon neutrality contribution mechanism

Carbon sequestration
Carbon sink (green, brown, blue)
Carbon tax
Carbon-free energy
Catenary
Certification of management systems in accordance with an international standard
Charging station / terminal
Circular economy
Climate emergency
Climate neutrality
CO₂
CO₂ quotas
Cogeneration
Combined cycle
Connected objects
Contribution to the Public Electricity Service
Corporate Social Responsibility
Cradle-to-cradle
CSR report

D

Decentralised or distributed production
Depletion of non-renewable resources
Depletion of the ozone layer
Digital
Digital sufficiency

E

E+C- certification
Earth Overshoot Day
Eco-concrete
Ecodesign
Eco-district
Eco-friendly practices
Ecological continuum
Ecological corridor
Ecological return on investment

Eco-responsability
 Ecosystem
 EcoVadis
 Electricity power plant
 Energy audit
 Energy consumption
 Energy distributor
 Energy efficiency
 Energy efficiency service company
 Energy greening
 Energy indecency
 Energy independence
 Energy load management
 Energy management
 Energy Management System (EMS)
 Energy mix
 Energy modelling
 Energy performance commitment
 Energy Performance Contract – “Assets”
 Energy Performance Contract – “Services”
 Energy Performance Contract – “Systems”
 Energy Performance Contracts (EPCs)
 Energy Performance Diagnosis (EPD)
 Energy performance guarantee
 Energy performance indicator
 Energy policy
 Energy poverty
 Energy producer
 Energy Recovery Unit (ERU)
 Energy renovation
 Energy savings
 Energy Savings Certificate (ESC)
 Energy Storage System (ESS)
 Energy sufficiency
 Energy supplier
 Energy transition
 Energy transition law to boost green growth
 Energy-Climate law
 Environmental and health declaration form
 EU ETS (European Union Emission Trading Scheme)
 EU-ETS
 European green deal
 Externality

F

FEDENE
 Final energy

Final Energy / Primary Energy conversion coefficient
 “Five stream” law
 FLAME
 French Energy Regulatory Commission

G

Frugality
 Geothermal energy (high / deep)
 Global Performance Contract
 Green energy
 Green funding
 Green investments
 Green IT
 Green mobility
 Green PPA (Power Purchase Agreement)
 Green roof
 Green walls
 “Green” electricity
 Greenhouse effect
 Greenhouse gas (GHG)
 Greenhouse gas emissions report
 Greening
 Greenwashing
 Grenelle I law
 Grenelle II law
 Grids (smart grids, micro grids)
 Guarantee of Origin
 GWP indicator

H

Haute Qualité Environnementale (HQE)
 Hazardous industrial waste
 Hazardous waste
 Hazardous waste production
 Heat exchanger
 Heat fund
 Heat recovery system
 Heating networks / Urban heating networks
 Hot water circuit
 Housing unit equivalent
 Human toxicity
 Hydrogen
 Hypervision

I

Indirect greenhouse gas emissions
Inert waste
INIES database
Installation classified for the protection of the environment
IoT

J

IPCC
Joules

K

kWh

L

Life-cycle assessment (LCA)
Light pollution
Line losses
Local authority / regional authority
Local energy community
Local power generation
Low-carbon building
Low-energy consumption building

M

Micro-cogeneration
Mini-cogeneration
Ministry for the Ecological and Inclusive Transition
Mobility credit
Multi-annual Energy Plan
National Allocation Plan

N

National low-carbon strategy
Negawatt
Non-financial performance statement
Non-financial reporting
Non-hazardous waste

O

Obligee
Own consumption
Own consumption – collective
Own consumption – individual

P

Paris Agreements (COP 21)
Partnership agreement (e.g.: PPP or Public-Private Partnership)
Performance Energy Management
Photovoltaic (PV) power
“Planet, People, Profit”
Prevented emissions
Primary energy
Product Environmental Profile (PEP)
Prosumers
Public electricity grid tariff
Public Service Delegation (PSD)

R

Rainwater collection
RARE network
RE 2020 (draft)
Recovery heat / Waste heat
Recycling
Refrigerants
Relamping
Remaining carbon budget
Renewable and Reclaimed Energies
Renewable electricity purchase obligation
Renewable energies
Renewable energy community
Renewable energy intermittency
Renewable heat
Renewable refrigeration
Residual emissions
Responsibility for climate inaction
Responsible procurement
Reuse
Roof terrace

S

Science Based Target (SBT)
Scopes 1, 2 and 3

Shared Energy Advisor
Short distribution channel
Significant Energy Use (SEU)
Smart building
Smart city
Smart grids
Soft mobility
Solar thermal energy
Solid Recovered Fuel
Stakeholders
Storage (electricity, hydrogen)
Subsidy
Sustainable building / Sustainable construction
Sustainable Building Plan
Sustainable Development
Sustainable Development Goals (SDGs)

T

“Tertiary” law
Thermal bridge
Thermal insulation
Thermal sieve
Tonne of CO₂ equivalent
TR 2012

U

Unavoidable energy
Urban and peri-urban agriculture (UPA)
Urban cooling networks
Urban Heat Island (UHI)
Usage transfer
Useful energy

V

Vehicle to grid
Virtual Power Plant
Visual pollution
Voluntary waste drop-off point

W

Walk the talk
Warm water circuit
Waste
Waste Electrical and Electronic Equipment (WEEE)
Waste fund
Waste recovery
Watt (kW, MW, TW)
Watt-hour
Wood-energy

Z

Zero carbon / Net zero emissions
Zero net artificialisation
Zero waste
“Zero-carbon” package

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

A

Acidification

Acidification is an increase in the pH levels of the planet's air, soils and water bodies as a result of human activities, and sulphur emissions in particular. This phenomenon affects the planet's natural ecosystems, particularly through the changes in biological and chemical balances that it creates. It is therefore essential to protect the atmosphere from it, as well as our soils and water bodies.

ADEME

Agence de l'Environnement et de la Maîtrise de l'Energie, France's environmental and energy management agency, founded in 1991. This public organisation manages, coordinates, finances and implements environmental protection initiatives and manages energy throughout France in all fields (energy and climate, air and noise, waste, polluted and fallow land, sustainable production and consumption, sustainable towns and regions).

Adiabatic power plant

Adiabatic cooling is a natural air-conditioning phenomenon. Also referred to as "evaporation cooling" and "biocooling", it involves drawing hot, dry air through streams of water. As the water evaporates, the air is cooled.



A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

A

Anthropogenic greenhouse gas emissions

Greenhouse gas emissions are generated by human activity. The primary greenhouse gases are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O) and the fluorinated gases (HFC, PFC, SF₆). Emissions of these six gases are weighted based on their global warming potential (GWP) and expressed in CO₂ equivalent. Total emissions are therefore expressed in CO₂ equivalent.

As-a-service

The “as-a-service” approach is part of a major societal trend: the shift from an ownership-based economy to one based on enjoyment or functionality (with priority given to usage). For clients, this means that they no longer have to pay investment and fixed maintenance costs. Instead, they have to pay variable operating costs based on predefined and guaranteed service levels (performance commitment). An “as-a-service” package is a turnkey, bespoke package made up of services which vary throughout the whole length or part of the value chain: strategy, design, engineering, construction of low-energy assets, digital platforms, operation, funding and performance obligation.

As-a-service carbon-free mobility

Turnkey, bespoke and co-financed sustainable mobility (which emits no carbon dioxide).



B

B Corp certification

US-based NGO B Lab created the B Corp certification for companies wanting to redefine their notion of business and develop a B Economy – one that is more inclusive and sustainable. It is in charge of auditing B Corp companies to have them certified and then recertified (every three years). More than 70,000 companies use the tools throughout the world and 3000 companies have been certified as B Corp companies.

Bilan Carbone®

The Bilan Carbone® is an assessment tool invented by the ADEME and now managed by the Bilan Carbone® Association. It analyses the activities of individuals, companies, local authorities and governments in terms of the direct and indirect greenhouse gas emissions that they generate. It focuses on six gases: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFC), perfluorocarbons (PFC) and sulphur hexafluoride (SF₆). Since CO₂ is the most common gas, it has become a benchmark when talking about data used for the Bilan Carbone (as well as for a number of other international reference frameworks, such as the GHG Protocol). The five other gases are converted into CO₂ equivalent and the final result of the assessment is expressed in tonnes of CO₂ equivalent.

BIM

BIM or Building Information Modelling is a smart process based on a 3D model which provides architecture, engineering and construction professionals with information about buildings and infrastructure. Building Information Modelling provides a virtual clone of the actual construction. This digital equivalent can then be used to plan, quantify, analyse, simulate and detect any errors, before the project is even delivered. It will then evolve over time with the construction (design, implementation, operation, renovation and even demolition). This process can therefore be used to ensure that the right decisions are made before works commence, thus reducing costs. BIM can also be incorporated into a construction project's carbon assessment.

Bioclimatism

Bioclimatism is a smart design approach for houses or buildings whereby the locale's geographical features are factored in so as to optimise and ultimately reduce their heating, cooling and lighting requirements. Opting for such an approach therefore results in energy savings. Particular attention is paid to which way the building is facing (so as to harness the sun's light and energy), the land on which it is built (climate, topography, noise zones, natural resources) and how it is constructed (windows, sun protection, compactness, materials, etc.).

B

Biodiversity

Biodiversity is the living fabric of our planet. It encompasses all natural environments and all forms of life (plants, animals, fungi, bacteria, etc.), as well as all the relationships and different types of interactions that can occur both among living organisms themselves and between these organisms and their living environment. In 2019, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services delivered its global report. This platform is made up of scientists from 110 different countries, who have declared that a sixth mass extinction is imminent. A million animal and plant species are threatened with extinction (that is one in eight species).

Biofuel

A biofuel or agrofuel is a type of fuel produced from non-fossil-based organic material, from biomass, which is used in addition to or instead of fossil fuel. First-generation biofuels are produced from food crops such as sugar cane and rapeseed. They include bioethanol (made from sugars and starch) and biodiesel (made from vegetable oil). Second-generation biofuels are under development and are derived from non-food plant matter such as crop residue and agricultural or municipal waste.

Biofuels

Biofuels are non-fossil fuels. They contain energy derived from organic matter (biomass). There are many different types of biofuel. Agricultural residue, such as animal waste, can also be used as biofuel. Biofuels may be solid, such as fuelwood, charcoal and wood pellets; liquid, such as ethanol, biodiesel and pyrolysis oils; or gaseous, such as biogas.

Biogas

Biogas is a green energy obtained by fermenting organic matter in an oxygen-free environment. This process is referred to as “methanisation”. It happens naturally in nature (in swamps or rice fields), or can be made artificially in digesters (for treating sewage sludge, industrial or agricultural organic waste, etc.). It contains a significant proportion of methane (50 to 65%) and so has a high calorific and energy potential.

Biomass

Biomass is all organic matter. Organic matter is matter of plant origin (food waste, wood, leaves, etc.) and matter of animal origin (animal corpses, creatures living in the soil, etc.). Biomass exists in three forms: solid (straw, wood chips, logs); liquid (vegetable oils, bio-alcohols); gas (biogas). Biomass is only considered a renewable energy source if it is regenerated at least as fast as it is consumed. Biomass, mainly in the form of wood, accounts for more than 10% of global primary energy consumption (energy that exists in nature before it is processed in any way), and is the second most plentiful supply of renewable energy in France (after hydropower).

B

Biomass boiler

A biomass boiler functions in the same way as a conventional boiler powered by fuel oil or gas, except that it uses wood fuel (or wood byproducts, such as sawdust and bark) and other types of organic waste, such as straw and fruit husks. The heat that it produces is distributed using a hot water system which spreads warmth into different rooms via a central heating circuit. Unlike wood stoves, which are mainly useful for providing additional heating, a biomass boiler can heat an entire house and even provide domestic hot water.

Biomethane

Biomethane is a 100% renewable gas, produced from agricultural and household waste, waste from the agrifood and catering service sector, or from sludge from water treatment plants. Purified biogas has the same properties as natural gas, and so can be used for the same purposes. It can therefore be very easily injected into the natural gas distribution network (unlike biogas, which tends to be used locally).

Bio-based materials

Industrial materials and products for chemistry obtained from renewable raw materials derived from biomass, such as plants. They reduce dependency on fossil fuels and minimise the impacts that the transport, building and packaging sectors have on the environment, as well as the impacts of cosmetics and detergents.

Biotope

In ecology, a biotope is a type of habitat defined by relatively uniform physical and chemical characteristics. This environment is home to all forms of life making up the biocoenosis (biological community): flora, fauna, fungi and populations of micro-organisms. A biotope and the biocoenosis living within it together form a characteristic ecosystem. This ecosystem evolves over time - particularly under the influence of climate - resulting in the biotope being balanced in a different way. In the 1950s, the United Nations became concerned about changes made by humankind, which is introducing artificial items into natural biotopes.

Boiler plant

A boiler plant is a facility that produces energy in the form of heat. This heat is used to heat one or several buildings, or even provide domestic hot water. A boiler plant can be made up of several boilers powered using different types of fuel. Such boiler plants are referred to as mixed heating systems (powered by wood and gas, for example). For a boiler plant to heat several buildings, a heating network needs to be created.

B

BREEAM certification

The Building Research Establishment Environmental Assessment Method (BREEAM) is the standard used to certify the sustainability of buildings. Globally, it is the most widespread certification.

Building Decarbonisation

Set of measures and techniques for reducing the carbon content of buildings, namely all the greenhouse gas emissions associated with a building's life cycle.

Building energy performance

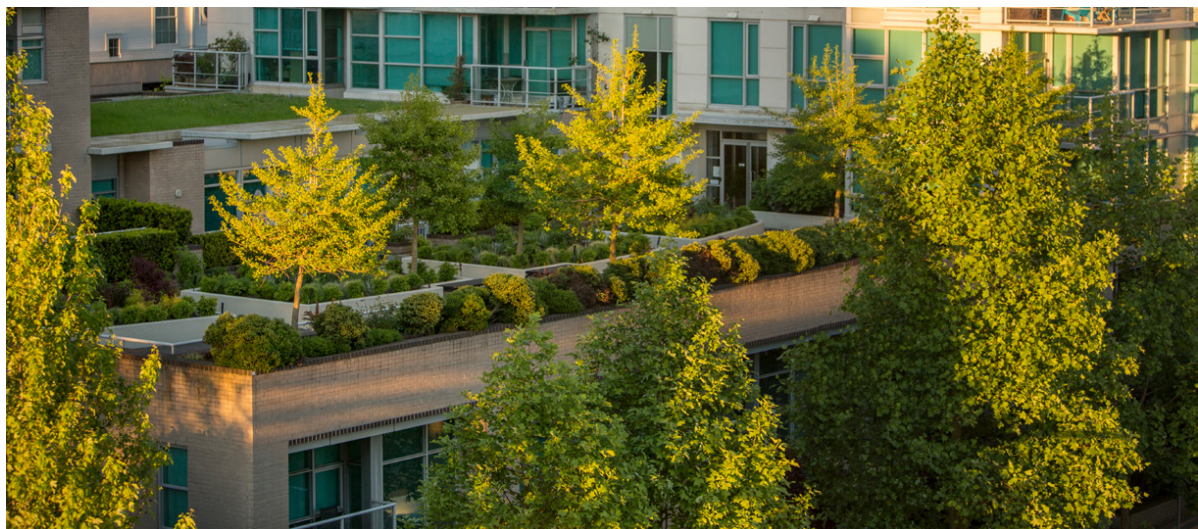
Quantity of energy consumed annually by a building, relative to the quality of the construction and its insulation, its equipment, how it is run and how its occupants behave. A building's energy performance is assessed by an energy performance diagnosis, and is then awarded a rating from A to G.

Building greening

Reducing the pollution produced by a building by rethinking its design or the way it has been built, or renovating it. This means reviewing the types and quantities of energy used in all phases of its life cycle, giving consideration to the depletion, recycling and possible reuse of construction and maintenance materials, thinking about the good physical and psychological health of the building's users, its maintenance teams and everybody living in the environment, as well as people who may be indirectly affected by any of the factors associated with the building's existence (such as pollution from transport because the building may have been built a long way from residential areas, for example).

Building reversibility

Solution that involves planning new real estate such that it can be used for either homes or offices, simply by making minimum changes to it.



C

Car fleet greening

Replacing polluting vehicles (generally ones powered by thermal combustion engines) with vehicles that generate little or no pollution (electric, rechargeable hybrid, hydrogen- and CNG-powered).

Carbon calculator / carbon footprint calculator

This type of calculator provides a rapid estimate of the impact that our activity has on our climate (or for certain types of calculator, of an individual's impact). These calculators can use the Bilan Carbone® methodology developed by the ADEME. First and foremost, these tools are designed to raise people's awareness: they enable small and medium-sized organisations committed to reducing their CO₂ emissions to measure them - quickly and simply - using data that they have available. The tool produces a diagnosis and identifies significant sources of emissions, such as transport, offices and consumables.

Carbon content (electricity, gas, renewables)

This is the amount of CO₂ contained in forms of energy. The emissions resulting from producing, transporting (also referred to as "upstream") and burning a tonne of coal, oil or natural gas are the easiest to calculate. So, based on information from the ADEME's Carbon Base, the Union Française de l'Electricité states that coal is - unsurprisingly - the fossil energy that emits the highest quantities of CO₂ (377 g CO₂/kWh). Then come domestic fuel oil (325 g CO₂/kWh), petroleum-based road transport fuels (between 310 and 325 g CO₂/kWh) and natural gas (227 g CO₂/kWh).

Carbon credit

A "carbon credit" is a certificate representing the right to emit one tonne of greenhouse gas emissions. A carbon credit system (certified emission reduction units) was introduced as part of the Kyoto protocol (flexibility mechanisms) in order to implement emissions reduction projects in developing countries (clean development mechanism). Carbon credits can also be issued by bodies, and are certified based on various standards. These credits are mainly used for carbon offsetting.

Carbon footprint

In France, for example, these are direct emissions from people and indirect emissions resulting from the production and transport of goods and services that they consume - be they produced in France or overseas (emissions resulting from exports are not included in a France's carbon footprint).

C

Carbon neutrality

State of balance that exists between a building's, company's or region's greenhouse gas emissions and the emissions absorbed by the planet's natural "carbon sinks" (oceans, soil, forests) or through technological means (capture and storage). Carbon neutrality is achieved by reducing direct emissions (insulation, low-energy equipment) and indirect emissions (local sourcing, educating users), and helping to fund projects that will increase carbon sinks (carbon compensation or global carbon neutrality contribution mechanisms).

Carbon offsetting / Carbon neutrality contribution mechanism

Carbon offsetting involves attempting to counterbalance one's own CO₂ emissions by funding projects to reduce other emissions or carbon sequestration projects. It is one of the schemes available for achieving carbon neutrality as part of the drive to mitigate global warming. It applies mainly to CO₂, but can also be used for other greenhouse gases. The initiative is often voluntary and can be adopted by private individuals, economic stakeholders, public authorities or even governments. It is underpinned by strict rules and benchmarks, such as the Gold Standard. Despite its co-benefits in relation to other aspects of sustainable development, carbon offsetting needs to be limited at the end of the chain to greenhouse gas emissions that cannot be reduced by more efficient use of energy and energy performance initiatives, which remain of priority importance. Carbon offsetting is not without its critics (in relation to its effectiveness, its limitations, it being compared to an "entitlement to pollute" for rich countries, etc.).

Carbon sequestration

Long-term storage of carbon dioxide away from the atmosphere.

Carbon sink (green, brown, blue)

Natural or artificial reservoir which absorbs carbon from the biosphere, trapping it in living matter and then, more or less sustainably, sequestering it in dead organic matter or in "biogenic" rock. Carbon sinks help to reduce the quantities of atmospheric CO₂. Oceans, soil, forests, peat, etc. are the primary carbon sinks.



C

Carbon tax

Environmental tax on carbon dioxide emissions, designed to cut greenhouse gases and so limit climate change. In countries that have emissions trading schemes, these systems only apply to certain economic sectors – usually the ones that generate the highest emissions –, because of the complexity of the system. For those sectors that emit fewer emissions (diffuse emissions), certain governments have introduced carbon taxes. With a carbon tax system, the price is fixed, and the behaviour of economic stakeholders leads to greater or lower reductions in emissions. With an emissions trading scheme, the reduction target is fixed, and the behaviour of economic stakeholders causes variations in the allowance price.

Carbon-free energy

Energy which emits little or no greenhouse gases (CO₂ in particular), such as renewable energies, reclaimed energies or nuclear energy.

Catenary

A catenary is a set of cables for supplying electricity to transport systems. Electrifying transport systems is a strategic tool for the energy transition.

Certification of management systems in accordance with an international standard

The best-known certifications are “ISO” (International Organisation for Standardisation) standards. The ISO 14001 standard, for example, defines the criteria for an environmental management system, and delivers certification where appropriate. It offers a framework that companies or organisations can use in order to put in place an effective environmental management system. Another type of ISO certification is the ISO 9001 standard. It sets forth the requirements to implement a quality management system for organisations wishing to continuously improve their customers’ satisfaction and provide products and services that are in compliance. The ISO 50001 standard specifies the requirements that organisations have to meet for implementing a policy for making more efficient use of energy, leveraging data so as to better understand issues associated with energy consumption and continuously improving energy management.

Charging station / terminal

A vehicle charging station is infrastructure equipped with one or several charging terminals for recharging vehicles – particularly electric and hydrogen-powered ones. A charging station has enough space for the vehicle to park in it, and includes a charging point (terminal, unit) and any other equipment needed (smart electric charging cabinet). There are nearly 28,000 electric vehicle charging points throughout France, and around 80 for hydrogen-powered vehicles.

C

Circular economy

Economic and social system that involves production, consumption and trading patterns based on eco-design, effecting repairs, repurposing and recycling, the overarching aim being to reduce the resources used and limit any damage caused to the environment. The model involves implementing new design, production and consumption methods that are more efficient and require less energy (eco-design, industrial and regional ecology, service economy, etc.) and viewing waste as a resource.

Climate emergency

Expression referring to the state of affairs requiring that measures be adopted by various establishments, towns and cities, universities and environmental activists to tackle climate change.

Climate neutrality

This term is generally used to mean the same as carbon neutrality. However, climate neutrality describes a state that would no longer have any specific negative effects on climate.

CO₂

Chemical abbreviation for carbon dioxide. CO₂, a colourless, inert and non-toxic gas, is the primary greenhouse gas in its natural state, along with water vapour. Its lifetime in the Earth's atmosphere is around 100 years. It is produced when compounds containing carbon are burned in the presence of oxygen. There are many natural sources of carbon dioxide: volcanic eruptions, respiration in plants, animals and people, natural forest fires, the decomposition of dead organic plant and animal matter, etc.

Quantities of CO₂ in the atmosphere are increasing regularly under anthropogenic pressure. Over the last 20 years in France, 70 to 90% of carbon dioxide emissions have been generated by burning fossil fuels.

CO₂ quotas

Also referred to as *European Union Allowances* (EUA). In the European CO₂ quota system, this is to the right to emit 1 tonne of CO₂. Each facility that has signed up to the system must give back a quantity of quotas equal to its annual emissions every year. Under certain conditions, facilities may receive a quota allocation for free. Incomplete quotas can be auctioned or sold on the secondary market. This is a way for manufacturers to offset their overruns or to leverage their good performance.



Cogeneration

Also see [Micro-cogeneration and Mini-cogeneration](#) page page 41

Cogeneration involves producing electricity and heat simultaneously using the same primary energy source and the same facility. It is based on the fact that generating electricity releases a significant amount of heat, which is usually unused. Cogeneration makes use of this heat, achieving an overall energy efficiency rate of up to 85%. Cogeneration therefore optimises consumption of the initial fuel and reduces greenhouse gas emissions.

Combined cycle

Combined cycle refers to a combined energy production mode or a power plant that uses more than one thermodynamic cycle. A gas-fired combined cycle thermal power plant produces electricity from the heat released by the combustion of natural gas. Capable of reaching full power in under an hour, these power plants can cope with significant variations in consumption, particularly on extremely cold days.

Connected objects

Objects with an Internet connection, giving them additional functional value, such as the ability to provide information or operate remotely, or interact directly with users. Connected objects first appeared on the market in the 2000s, and have increased rapidly in number. They are found in all fields, including industry, health, sport, entertainment and domestic security.

Contribution to the Public Electricity Service

The contribution to the public electricity service is a tax on all deliveries of electricity to an end consumer. The following entities and individuals must pay the contribution to the public electricity service: electricity suppliers (companies), people who generate electricity and use it for their own requirements. The end electricity consumer pays it (via their energy bill).



C

Corporate Social Responsibility

Application of the aims of sustainable development to a company, i.e. factoring in the social, environmental and economic issues associated with their activities, with the overarching aim of ensuring that their impact on society is positive, while they remain economically viable. The scope of CSR is defined by the international ISO 26000 standard, focusing on seven key areas: organisational governance, human rights, labour practices, the environment, fair operating practices, consumer issues, and community involvement and development.

Cradle-to-cradle

Cradle-to-cradle design is an environmental ethics concept or industrial production philosophy. The linear economy, which involves extracting raw materials, producing goods and then consuming them before throwing them away, is being increasingly challenged. Indeed, it is seen as the primary cause of global warming, environmental pollution and growing shortages of resources. Within the broader framework of the circular economy, the cradle-to-cradle model integrates an ecological requirement into all levels of a product's life cycle - from its design and production to its eventual reuse. The idea is to preserve raw materials, prevent pollution and avoid all waste. A manufactured product must be able, once it has been recycled, to once again produce the same product - simply by incorporating renewable energy into the cycle. A sort of "nothing is lost, nothing is created, everything is transformed" version of eco-design.

CSR report

see Corporate Social Responsibility (CSR), page 17

Document designed to inform third parties (shareholders, clients, employees, banks, the general public, the media, etc.) of the various initiatives that a company has implemented for societal responsibility purposes and the results of these initiatives. In France, listed companies employing more than 500 people which generate turnover of more than €100 million are required by law to publish a non-financial performance statement every year.



D

Decentralised or distributed production

Production of electricity using low-capacity facilities connected up to the electricity grid at low-voltage levels: low or medium voltage.

Depletion of non-renewable resources

Non-renewable resources are limited resources which accumulate over thousands of years. This indicator quantifies the consumption of raw materials during a product's life cycle, thus reducing their availability for future generations. It is expressed in terms of per-capita reserves. A unit which represents the quantity of resources available for the average world citizen.

Depletion of the ozone layer

The depletion of the ozone layer refers to its thinning in the planet's stratosphere. This is the result of emissions of certain specific gases (particularly CFC and HCFC-type refrigerants), and its effect is expressed in kilograms of equivalent CFC-11. The depletion of the ozone layer has been tackled by a number of international agreements prohibiting such fluids, such as the Montréal Protocol signed in 1987.

Digital

Pertains to the use of technology and using or storing data or information as digital signals. Digital technologies are now used across a building's whole life cycle - from design, operation and usage through to preparing for its reversibility.

Digital sufficiency

Digital sufficiency aims to reduce the environmental impact of digital technologies. According to a report published by the World Wildlife Fund (WWF) and the Green IT Club, information technology accounts for 4% of the world's total greenhouse gas emissions - which is as much as the whole aviation sector produces in a year.



A B C D **E** F G H I J K L M N O P Q R S T U V W X Y Z

E+C- certification

The E+C- certificate (Bâtiment à Énergie Positive et Réduction Carbone - Positive-energy building and carbon reduction) is issued in recognition of the attainment of precise performance levels: four levels of energy performance and two levels of environmental performance. It is issued by CertiVéA for non-residential buildings, either in association with the HQE Bâtiment Durable (sustainable building) certification, or separately.

Earth Overshoot Day

Illustrative calendar date on which the ecological footprint of anthropogenic activity (fishing, livestock rearing, crop farming, deforestation, fossil fuel mining, etc.) exceeds the planet's capacity to regenerate the resources in question. The date is calculated by NGO Global Footprint Network, in partnership with the WWF. In 1998, it was 30 September. In 2019, it was two months earlier - 29 July.

Eco-concrete

Environmentally friendly construction material made from high-quality recycled products. Eco-concrete reduces the need to transport gravel and mine quarries, as well as reducing manufacturing costs. Preference is given to recycling waste from building demolition sites. It has the same resistance properties as conventional concrete. Eco-concrete can be made from demolition concrete or from plant fibres.

Ecodesign

Design of a product, object or service which factors in its negative effects on the environment across its whole life cycle, so as to reduce them, but without compromising on its qualities or performance.

Eco-district

Section of a town or set of buildings (a business park, for example) which has been built in accordance with sustainable development requirements, particularly in relation to energy, environment and social life. France's EcoQuartier certification encourages exemplary sustainable urban planning practices across its regions. It is awarded in recognition of a local authority's vision and determination, and the action it has taken for the district in question. The Bonne business park (Grenoble), Clichy Batignolles (Paris) and the Grand Coudoux (Coudoux) were all awarded EcoQuartier certification in 2019.

E

Eco-friendly practices

Community-spirited behaviour designed to reduce pollution and limit water or energy consumption, as well as waste production. Eco-friendly practices fall under energy sufficiency practices (reducing demand so that it just covers requirements, but without compromising on comfort or quality-of-life).

Ecological continuum

The ecological continuum is made up of all the environments that enable a group of species to flourish. These environments are functionally interlinked. This continuum thus consists of various zones: buffer zones, nodal zones (rivers, the hearts of forest areas, etc.) and the ecological corridors that link them together. At regional or national level, these continuums make up an ecological network that needs to be protected as much as possible with the various packages and solutions geared towards achieving carbon neutrality.

Ecological corridor

Ecological corridors are areas of habitat interconnecting reservoirs of biodiversity. They provide species with the conditions they need in order to move between areas and complete their life cycles. A corridor connects different populations and makes it possible for species to spread and migrate, as well as enabling disturbed environments to be re-colonised (e.g.: a footbridge over a motorway which connects up two areas of forest is an ecological corridor). They are vital for protecting biodiversity and enabling ecosystems to function.

Ecological return on investment

Some of the benefits derived from renovating a building to improve its energy performance (everyday comfort, ageing, maintenance and enhancement of real estate, reduction of ecological impact, etc.).

Eco-responsibility

Incorporation of environmental and social concerns into the way in which assets are managed and public administrations are run.

Ecosystem

System within which there are cyclical exchanges of matter and energy resulting from interactions between the various types of organisms living within it (biocoenosis) and their environment (biotope).



EcoVadis

EcoVadis is a ratings platform to assess companies' CSR practices. Its aim is to make sustainable management of partners easier by tracking and sharing CSR performance with all of the stakeholders involved. Companies of all sizes contribute to the platform and share various types of information on it. EcoVadis includes evidence-based assessment sheets, results, comparative data by sector and performance monitoring and improvement tools.

Electricity power plant

An electricity power plant is an industrial site at which electricity is generated. This electricity is then transported to consumers – private individuals or manufacturers – located some distance away from the plant via the power grid. Electricity is generated by converting primary energy. This primary energy can be mechanical (the power of the wind, of water in rivers or of the tide), chemical (redox reactions with fossil fuels or other types of fuel), nuclear or solar. These primary energies can be renewable (biomass), or their reserves may be limited (fossil fuels).

Energy audit

The purpose of an energy audit is to define a programme of works to improve the built environment's energy performance. In particular, such an audit assesses the extent to which the built environment can keep pace with changes in what it is used for. Choices can then be made about the future of these assets: they can be sold, demolished, new buildings can be built or existing ones can be renovated, they can be pooled or they can be used for a different purpose. Energy audits are mandatory for certain community buildings and since 2015 have been required for companies of more than 250 employees.

Energy consumption

Energy consumption is the indicator which gives the quantity of energy consumed – fossil, hydroelectric, nuclear or other. It factors in the energy of the matter produced during combustion and is expressed in MJ (Megajoules) or in kWh, depending on the power of the equipment.

Energy distributor

Company entrusted with distributing electricity via a region's or country's high- or medium-voltage grid.

Energy efficiency

Improvements in processes, technologies and products in order to reduce energy consumption and increase their yield. The aim is to achieve at least the same result, but with less energy.

A B C D **E** F G H I J K L M N O P Q R S T U V W X Y ZE

Energy efficiency service company

Person or legal entity that delivers energy efficiency services and / or implements other measures to improve energy efficiency at a user's facility or premises, and accepts a certain degree of financial risk in so doing.

Energy greening

Process whereby a form of energy containing carbon (fossil energy) is replaced by a form of energy containing less carbon or a renewable energy. A renewable energy is energy derived from sustainable, inexhaustible sources that are available in limitless quantities (wind power, solar power) and which generate little or no pollution (producing and consuming it emits significantly lower quantities of greenhouse gases than other energy sources... or even none at all).

Energy indecency

Term used to describe excessively energy-guzzling homes, the energy categories of which are greater than "G" - namely more than 450 kWh PE/m²/year. The purpose of this description is to encourage owners of such premises to undertake energy renovation works before they rent them out. There are currently no systems in place for obliging them to do so.

Energy independence

People can now generate their own energy so as to avoid being dependent on energy suppliers. This also gives them the means to sell part of what they generate to other people, if they generate a surplus. As far as renewable energies are concerned, the concept can have its limitations: the sun and the wind are intermittent energies, and are also random. Although such difficulties cannot be completely overcome, they can be mitigated by using storage systems, which can however be costly.

Energy load management

Action voluntarily taken by a manufacturer or individual to temporarily reduce electricity consumption relative to normal levels.

Energy management

Ongoing process to improve a company's energy performance by implementing energy management initiatives across all its departments (Maintenance, New works, Purchasing, HR, Management).

E

Energy Management System (EMS)

An Energy Management System is a set of computer tools used by electricity transmission system operators to monitor, control and optimise electricity production and grid performance, while at the same time ensuring its reliable operation. An EMS can, for example, be installed locally on a project that uses several renewable energies (wind, photovoltaic, marine energies, etc.).

Energy mix

The energy or power mix refers to the mix of various primary energy sources used by an organisation, network, town, region or country. In 2018, France's energy mix was made up of nuclear (41%), oil (29%), natural gas (15%), renewable energies and recycled waste (11%) and coal (4%).

Energy modelling

Model for simulating a building's energy behaviour – using various determining factors – so as to configure, calibrate or adjust the perfect model.

Energy performance commitment

Contractual obligation that a supplier or service provider has in relation to a beneficiary (purchaser), assuring them (or even guaranteeing them) that a defined result will be achieved (as a general rule, a reduction in a system's, a building's or a property's final energy consumption relative to a benchmark). It must be possible to measure performance over time in accordance with a measurement plan.

Energy Performance Contract – “Assets”

“Asset” EPCs are global contracts under which major renovation work is carried out in order to make significant improvements to a building's energy efficiency. This family of contracts involves work on the building, such as insulating and waterproofing it (“passive” energy performance, as opposed to the “active” performance of the first two families). In addition to the work carried out, the buildings are run and maintained over the long term. They guarantee energy performance of 40 to 60% with an average payback period of more than 10 years.

Energy Performance Contract – “Services”

“Service” EPCs are active energy efficiency service contracts. They involve equipping buildings with remote monitoring and control systems used for establishing dialogue between stakeholders involved in energy performance, and setting targets that are understood and shared (for optimising consumption, tackling energy wastage, etc.). “Service” EPCs optimise the way in which energy consumption is managed and guarantee energy performance of 10 to 15% with an average payback period of 1 to 5 years.

E

Energy Performance Contract – “Systems”

“System” EPCs are global energy production / distribution system renovation and associated active energy efficiency service contracts (that may include some work carried out on the building’s windows or loft space). They are mainly based on changing or modernising the building’s energy production / distribution equipment. “System” EPCs guarantee energy performance of 20 to 25% with an average payback period of 5 to 10 years.

Energy Performance Contracts (EPCs)

Energy performance contracts were first introduced in France by the Grenelle I law in 2009. They are designed to improve and guarantee the energy performance of a building or of housing stock relative to a benchmark. EPCs are the only contracts exclusively dedicated to energy efficiency and cutting consumption. An EPC is any contract entered into by a building’s owner and an energy efficiency service company seeking to guarantee – compared with a contractually-defined benchmark – a reduction in the building’s or buildings’ energy consumption, verified and measured over time, by investing in works, supplies or services. In public procurement contracts, they are entered into as standard contracts for Service EPCs, and as overall performance contracts or partnership contracts for System EPCs and Asset EPCs.

Energy Performance Diagnosis (EPD)

An EPD provides information on the energy and climate performance of a home or tertiary building by assessing its energy consumption and impact in terms of greenhouse gas emissions. Such a diagnosis is compulsory when selling or renting a home. They are different from energy audits.

Energy performance guarantee

Most often, energy performance is contractually guaranteed (a reduction in end consumption is guaranteed by an Energy Performance Contract, or a maximum consumption level target).





Energy performance indicator

Key Performance Indicators for energy, used to manage an organisation's energy usage.

Energy policy

Policy adopted by public authorities on energy issues. Energy policy depends on each individual country's characteristics - its own energy resources, climate, living standards, population density, industrial fabric, etc. It includes a geopolitical dimension influenced by the international nature of raw materials markets, and often a growing environmental consideration. It is implemented via multi-year programming instruments (such as France's low-carbon strategy, the multi-annual energy plan, the building energy renovation plan, etc.), laws (such as the energy transition law to boost green growth, the Energy-Climate law, the ELAN law on changes in housing, development and digital technologies, the circular economy law, the Mobility law, etc.), other legislation (the law requiring tertiary buildings to improve their energy efficiency, the energy performance diagnosis law, etc.) and bylaws.

Energy poverty

The Grenelle II law defines energy poverty as follows: "A person is said to be suffering from energy poverty in their home if they have difficulty getting the energy they need in order to meet their basic requirements, either because they cannot afford to pay for it, or because of the conditions in which they live". To measure energy poverty, France's national fuel poverty watchdog uses a range of indicators: the share of a household's income that goes on energy bills; the "low revenue, high spending" indicator; the perception of comfort. Some 5 million households are affected by energy poverty in France.

Energy producer

Company which "produces" energy using various sources (water, steam, gas, oil, organic matter, wind, the sun, etc.).

Energy Recovery Unit (ERU)

Industrial facility for incinerating non-recyclable household waste. The energy derived from combustion can be used to generate electricity or power district heating networks. Recovering energy in this way helps preserve fossil resources, limits greenhouse gas emissions and reduces the quantities of final waste sent to landfill.



Energy renovation

Set of services (and / or works) designed to reduce a building's final energy consumption, particularly by reducing energy losses from its envelope (thermal insulation), modernising its energy production systems and equipment (heating, domestic hot water, air-conditioning, lighting and ventilation) and implementing systems for managing and controlling consumption (supervision, hypervision, space rationalisation, sufficiency, etc.). These services can be covered by subsidies and benefit from variable tax incentives, depending on annual finance legislation.

Energy savings

Reductions in energy consumption so as to protect the planet's non-renewable natural resources and prevent energy being lost.

Energy Savings Certificate (ESC)

Also see Obligee page 43

The ESC scheme was created by a law passed in 2005 as a way of incentivising energy savings in various sectors. It is underpinned by an obligation to generate energy savings. Public authorities require energy and fuel vendors to sign up to the scheme. There are two types of ESC: conventional ESCs and poverty ESCs (operations implemented to help low-income households).

Energy Storage System (ESS)

This is a system for storing energy, and is also referred to as a BESS (Battery Energy Storage System) when it is stored in batteries. An ESS is a way of making effective use of renewable and clean energies when they are intermittent – such as wind power and solar power. Storing heat and electricity is a way to stabilise energy networks and smooth out any irregularities in production / consumption when renewable energies are used – particularly at insular or remote sites.

Energy sufficiency

Reduction in energy consumption by using systems appropriately, eliminating excess usage and sharing energy-consuming equipment. Energy sufficiency can be both an individual and a collective initiative.

Energy supplier

Company which supplies gas, electricity, heat / refrigeration or fuel.

E

Energy transition

Profound structural change in people's energy production and consumption patterns. This includes reducing energy demand, in particular by improving the energy efficiency of buildings, developing new technologies, and by changing people's lifestyles. It therefore also involves a behavioural and socio-technical transition, which is underpinned by a radical change in energy policy.

Energy transition law to boost green growth

Adopted on 17 August 2015, France's energy transition law to boost green growth sets out to contribute effectively to tackling climate change and protecting the environment, while at the same time bolstering its energy efficiency and guaranteeing access to energy at competitive prices. It focuses in particular on housing, construction and regional governance. It was superseded by the Energy-Climate law.

Energy-Climate law

France's Energy-Climate law was adopted on 8 November 2019 and is designed to tackle the ecological and climate emergency. France has set itself the target of reducing its consumption of fossil energies by 40% between now and 2030, of reaching carbon neutrality by 2050 and of dividing its greenhouse gas emissions by six by that date. It sets forth action in four areas: gradually reducing dependency on fossil fuels by developing renewables, tackling thermal sieves, establishing new tools for coordinating, managing and assessing climate policy, and regulating the electricity and gas sector. It also recognises for the first time that we are facing an ecological and climate emergency.



A B C D **E** F G H I J K L M N O P Q R S T U V W X Y Z

E

Environmental and health declaration form

Standardised document presenting the results of the Life-cycle assessment for a product, together with health information, so as to calculate a building's environmental and health performance for its eco-design.

EU ETS (European Union Emission Trading Scheme)

This is the European CO₂ quota system. It was introduced in 2005. It is designed to bring about a gradual reduction in the overall emissions of high greenhouse gas emitting facilities, and create a market for pollution permits.

EU-ETS

see EU ETS, page 28

Emissions trading scheme.

European green deal

Set of policy initiatives put forward by the European Commission with the overarching aim of making Europe climate neutral by 2050.

Externality

An externality results from a human activity when the party responsible for the activity in question does not fully factor in its effects on other people's production and consumption possibilities, and no form of compensation exists for these effects. When such effects are negative, they are referred to as external costs, and when they are positive, they are external benefits.



F

FEDENE

Fédération des Services Energie Environnement – France’s energy and environment services federation. Group of 500 companies supplying energy and environment services to buildings, facilities, energy infrastructure and occupants.

Final energy

“Final” energy is the quantity of energy that is used and billed where it is used. It involves “primary energy”, which is this final quantity, together with the energy needed to produce and transport it.

Final Energy / Primary Energy conversion coefficient

The primary energy conversion factor of a kWh of electricity is the coefficient used to aggregate electrical energy with primary energies in energy assessments. This is an extremely important parameter in energy policy. It is currently 2.58 (the coefficient used in France’s 2012 thermal regulation, for example), but it should fall to 2.3. A drop in this coefficient favours solutions involving electricity.

“Five stream” law

The energy transition law to boost green growth (see Energy transition law) encourages people to tackle wastage by cutting it at its source, sorting it and recycling it. An extension of this law enacted in 2016 requires that stakeholders which produce and possess waste (companies, businesses and administrations) sort it at its source into five different streams (paper / cardboard, metal, plastic, glass and wood) so as to make recycling it easier.

FLAME

Fédération des Agences Locales de Maîtrise de l’Energie et du Climat – France’s federation of local agencies engaged in ensuring energy and climate control. Its purpose is to involve stakeholders in regions throughout France to support the energy transition and the development of society.

French Energy Regulatory Commission

The French Energy Regulatory Commission is an independent French administrative authority that was created in 2000. Its role is to ensure that the energy market in France functions smoothly and to rule on any disputes between users and various operators. Its competence as a regulator also covers the gas and electricity markets.

F

Frugality

Frugality is about “doing better with less”. Frugal innovation, inspired by the Indian concept “*jugaad*”, advocates genius and simplicity to bring about efficiency. Preserving the planet’s resources is the key aim underpinning this concept, which is in line with the principles of sustainable development.

G

Geothermal energy (high / deep)

The Earth’s heat resources, which are extracted using industrial processes to produce heat or electricity.

Global Performance Contract

Contract that covers operational maintenance, combined with delivering or designing services so as to meet targeted performance objectives. The objectives are defined in terms of levels of activity, service quality or energy efficiency, or in terms of consequences on the environment. Because of their global nature, such contracts allow for a competitive procurement procedure (hearings during which the initial bid is modified as the procedure unfolds). The Global Energy Performance Contract has replaced the “CREM” contract, which now no longer exists.

Green energy

Clean energy or green energy is an energy source, the extraction of which only generates negligible quantities of pollutants compared with other more widespread sources of higher-pollution energy. There are several sources of green energy. The primary ones are geothermal, wind, solar, biomass and biogas, as well as reclaimed or recovered energy.

Green funding

Investments for the ecological and energy transition.

Green investments

Investments in asset funds focused on developing technologies to help deliver the energy transition and mitigate impacts on the environment: wind power, solar power, biofuels, eco-design, etc. In France, such investments benefit from fiscal incentives.

G

Green IT

Set of methodologies designed to reduce the social, economic and environmental footprint of digital technologies. Just to provide an idea, one email sent without an attachment emits approximately 10 g of CO₂ – the equivalent of a plastic bag's carbon footprint. It is thought that digital activities account for approximately 4% of the world's total annual CO₂ emissions.

Green mobility

Green mobility is a regional development and management policy which gives preference to practical, low-pollution forms of mobility which do not harm the environment. Green mobility applies to urban development, infrastructure and structuring public transport networks. It is based on the application and development of organisational principles and technologies.

Green PPA (Power Purchase Agreement)

Mutual agreement between a producer and a purchaser under the terms and conditions of which the purchaser has direct access to green electricity, without any risk of the supply being disrupted, and such that they contribute to the development of renewable energies.

Green roof

Flat or slightly sloping roof with a vegetation substrate (in which plants can be planted and from which they can extract the minerals that they require), which protects biodiversity and the environment in urban settings (improving air quality, reducing urban heat islands and providing the building with thermal insulation).

Green walls

Vertical gardens or ecosystems which are created by growing plants (creeping or otherwise) along a dedicated wall or a building façade. In towns and cities, green walls play an important role in maintaining biodiversity, providing insects and birds with a habitat and a source of food, and by helping to control air pollution.

“Green” electricity

Electricity produced using a renewable energy source: hydropower, wind, solar, geothermal, wave and tidal energy, biomass (wood, landfill gas, wastewater treatment plant gas, biogas). By extension, electricity is described as “green” if the electricity supplier can prove that a quantity of green electricity or electricity produced using a renewable energy source equivalent to the amount consumed has been injected into the electricity grid. An EU tracking tool has been developed for this purpose: Guarantee of Origin certificates.

G

Greenhouse effect

Warming of the Earth's atmosphere caused by the presence of certain heat-retaining gases (including carbon dioxide and methane). These gases absorb radiation from the Earth, delaying the speed at which energy from the atmospheric system is lost into space.

Greenhouse gas (GHG)

Gaseous components of the atmosphere, both natural and artificial, that absorb and re-emit the Earth's infrared radiation. They help to retain warmth within the Earth's atmosphere. The main greenhouse gases are water vapour (H₂O), carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), ozone (O₃) and the fluorinated gases (HFC, PFC, SF₆).

Greenhouse gas emissions report

The greenhouse gas emissions report is an assessment of the total greenhouse gases emitted over a 12-month period as a result of activities associated with a product or an organisation, both directly and indirectly. It is a decision-support tool: it can be used to identify the main sources of emissions with a view to implementing initiatives to cut them. The greenhouse gas emissions report has been mandatory since 2010 for the government, companies employing more than 500 people, communities of more than 50,000 people and public establishments of more than 250 people. These reports should be renewed every four years and are now published on the ADEME's website.



G

Greening

Natural or artificial process that involves covering a surface with plants.

Greenwashing

Term used by environmental pressure groups to refer to information published by companies about the progress they have made in terms of incorporating the principles of sustainable development into what they do, but which is not necessarily underpinned by concrete action.

Grenelle I law

The Grenelle I law was adopted on 3 August 2009 and formalises implementation of the decisions made in the wake of the major Grenelle de l'Environnement nationwide debate. It contains 47 articles covering the energy, construction and transport sectors, as well as biodiversity, natural environments and environmental and health risks.

Grenelle II law

The Grenelle II law was adopted on 12 July 2010. It contains 248 articles and confirms France's determination to safeguard the environment by implementing a selection of the commitments that were made in the wake of the Grenelle de l'Environnement debate in six key areas: buildings and urban development, transport, energy, biodiversity, health & waste risks, governance.

Grids (smart grids, micro grids)

Electricity transmission and distribution networks equipped with technical and computerised tools for optimising management by factoring in user behaviour and supply from producers.

Guarantee of Origin

Electronic document issued to an end client that proves that a given share of energy has been produced from renewable energy sources or using cogeneration.

GWP indicator

The GWP (Global Warming Potential) indicator is used to compare the influence that different types of refrigerants have on global warming.



Haute Qualité Environnementale (HQE)

Standard in France designed to limit the environmental impacts of a building (under construction or in the process of being renovated) by ensuring compliance with 14 target criteria, while at the same time ensuring that occupants enjoy healthy and comfortable living conditions. HQE® is not a regulation, or a label: it is a standard based on a voluntary approach. However, it can be certified. A variant - “HQE Exploitation” - also exists.

Hazardous industrial waste

Waste that requires special treatment, in compliance with regulatory requirements. Waste tracking slips must be generated for all waste collected and treated, including solvents, greases, adhesives, resins, fluorescent bulbs, mercury lamps, etc.

Hazardous waste

Hazardous waste is waste that presents a risk to human health and the environment: asbestos waste, equipment containing chlorinated chemical derivatives, chemical products (including gas cylinders), electrical and electronic equipment waste, printer cartridges, batteries and storage cells, certain types of packaging, fluorinated gases, whole waste mineral and synthetic oils, medical waste, agricultural supply waste and unused equipment, used chemical personal protection equipment, end-of-life vehicles.

Hazardous waste production

This indicator gives the quantity of waste requiring special treatment created over all life-cycle phases (manufacture, distribution and usage), and is expressed in kg.

Heat exchanger

System for transferring thermal energy from one fluid to another without mixing them (in two separate circuits).

Heat fund

Public fund managed by the ADEME which helps fund the development of renewable and reclaimed heat production (to develop district heating or cooling networks) for community housing, local authorities and companies. The heat fund has a budget of €350 million for 2020.

Heat recovery system

Waste heat or “lost heat” recovery system, enabling the heat to be used as thermal heat.

H

Heating networks / Urban heating networks

A heating network is a system for distributing heat produced centrally, such that it can be used by more than one user. It is made up of one or several production units, a primary distribution network within which heat is transported by a heat transfer fluid, and a set of heat-exchanger substations used by a secondary distribution network to supply heat to the buildings, for use by residents. Urban heating networks are usually managed by public-service concession holders (under very long contracts entered into with a local authority) and the people who make use of them are referred to as subscribers. Such networks are labelled “virtuous networks” when renewable or recovered energies make up more than 50% of them. When this is the case, they qualify for a reduction in the VAT rate.

Hot water circuit

This is a hot water distribution system which can be used for several types of heating for a building, rendering it future proof right from the construction phase: fuel boiler, heat pump, heating network – all of which can be more or less renewable.

Housing unit equivalent

Represents the consumption of an average housing unit of around 70 m², occupied by a family of four. It is used as a common reference to express quantities of heat delivered, irrespective of the properties of the buildings being heated (housing units, offices, hospitals, gymnasiums, etc.).

Human toxicity

Certain substances may be harmful to people’s health. Human toxicity is the level above which a chemical has a negative or harmful effect on the biology of a person exposed to this substance for a given period of time. It is expressed in CTUs (chronic toxicity unit).



A large, stylized white letter 'H' is centered within a teal-to-green gradient square.

Hydrogen

Hydrogen has a key role to play in the energy transition and features prominently in our planet's ecosystems: water, organic matter such as biomass, fossil resources (oil, coal, natural gas).

Hydrogen only occurs very rarely in its pure form on Earth, but can be produced:

- by steam reforming of methane ("grey hydrogen", which is a pollutant);
- by electrolysis, which involves passing a low-voltage current through water (H_2O) to break the molecule down ("green hydrogen" if the electricity has been generated using renewable means, such as wind power, photovoltaic or hydropower). The opposite reaction occurs in a fuel cell: hydrogen is recombined with the oxygen in the air to create a water molecule, generating an electrical current;
- by capturing waste hydrogen, or hydrogen that is the by-product of an industrial process.

It can be used to store electricity, for mobility purposes (individual person's car, bus, HGV, train, etc.), or as an input for an industrial process.

Hypervision

Centralising infrastructure and application supervision tools and reference frameworks to provide a comprehensive and consolidated overview. Unlike supervisors, which are management applications (infrastructure interaction and control), hypervisors collect data that they use globally to create scenarios and trigger required actions.



Indirect greenhouse gas emissions

Emissions indirectly emitted through the purchase of electricity, or heat and refrigeration, as well as by using a product or a service upstream or downstream.

Inert waste

Inert waste includes gravel, sand and earth. It does not undergo any major physical, chemical or biological change during storage and does not decompose. It can be used as backfill if it is of sufficiently good quality or can be taken to quarries or inert waste storage facilities. If this waste has been polluted by hydrocarbons or other products that are hazardous for people or the environment (e.g. soiled earth, if it contains any plastic, etc.), it is classified as Special Industrial Waste and is treated accordingly.

INIES database

INIES is France's national database of environmental and health declaration sheets for products, equipment and services for assessing the performance of infrastructure. It is managed on a participatory basis by stakeholders involved in construction – including the public authorities – and is an operational tool for making eco-design the norm for new buildings. The INIES database provides Environmental and Health Declaration Sheets for building products, Product Environmental Profiles (PEP) for equipment, data about services (energy, water, etc.) and material life cycle inventories.

Installation classified for the protection of the environment

An Installation Classée pour la Protection de l'Environnement is an installation that is classified for the protection of the environment. It can be operated or owned by any public, private person or legal entity. It may represent a danger or an inconvenience for the comfort of people living locally, for public health, safety and cleanliness, agriculture, the protection of nature and the environment, or for the conservation of sites and monuments. Examples of ICPEs include: works, purification plants, waste storage sites, industrial sites covered by the Seveso directive, wind turbines of more than 12 m, combustion facilities and water-cooling towers.

IoT

Internet of Things. Network of physical objects that are embedded with sensors, software, and other technologies for the purpose of connecting and exchanging data with other devices and systems over the Internet, thus creating value for users.

I

IPCC

Intergovernmental Panel on Climate Change - a body established by the World Meteorological Organisation. It is dedicated to objectively summarising scientific and technical publications about climate change and assessing the climate risks to which both the world's developing and developed countries are exposed, both in the near future and in the medium-term future.

J

Joules

Legal unit of energy, used in particular to quantify the energy consumption of electrical equipment. 1 joule is roughly the energy required to raise a 100 g weight to a height of 1 m above the ground. It is also the energy required to produce one watt of power for one second. So, 1 kWh = 3 600 kJ (kilojoules). 1 Joule is a very small quantity of energy. More often than not, kWh and its multiples are used.



K

kWh

Energy flows are measured in Watts per hour (energy consumed by a device that consumes one watt operating over a one-hour period). The kWh (kilowatt-hour) is the standard unit of energy measurement. It is equal to 1 kW of power sustained for one hour.

L

Life-cycle assessment (LCA)

LCA is a technique for assessing the environmental aspects and potential impacts of a system of products. It is enshrined by a series of ISO standards: 14040 and 14044. The manufacture of any product and the delivery of any service are linked to inflowing and outflowing energies and materials throughout their life cycles (from the cradle to the grave), so as to convert them into a number of environmental impacts.

Light pollution

Excess production of artificial light in the night-time environment - mainly from public lighting and advertising. Light pollution has many negative effects: in animals, it can disturb their biological rhythms, nocturnal activities and migratory habits, and in people, it can lead to disorders in their biological rhythms and create sleeping problems. Furthermore, these excessive light emissions represent significant energy wastage.

Line losses

Losses suffered while transmitting electricity across the electric grid, mainly resulting from the resistance of the conducting material - electricity is lost in the form of heat (Joule effect). These losses depend on the length of the grid, the quality of the conducting material and components which might interfere with its insulation (humidity levels, salt water sprays, cables falling on the ground, etc.).





Local authority / regional authority

Territorial authorities are public legal entities that are separate from government. As such, they have patrimonial and legal autonomy. The French Constitution stipulates that territorial authorities shall be free to govern themselves under conditions laid down by law. They only have administrative competencies, which means that they cannot have state competencies, such as ones entitling them to enact laws or autonomous rules. Furthermore, they do not enjoy advisory powers or competencies for managing international relations. The following are territorial authorities in France: communes, départements, regions, special status territorial authorities and overseas territories.

Local energy community

Created by the European Union, local energy communities help European people, small companies and local authorities manage energy issues where they are. They can implement energy sharing schemes and sell the renewable energy that they produce on the market, guaranteeing priority access to small facilities for injecting renewable energy into the grid.

Local power generation

Producing energy close to where the requisite resources are located and close to where it is to be consumed, based on a decentralised production system.

Low-carbon building

Low-carbon buildings (certified BBCA or bâtiment bas-carbone in France) are one of the measures resulting from the French law on energy transition for green growth. In order to be BBCA-certified, candidate buildings must meet a number of requirements. Buildings need to be energy sufficient and bio-based materials need to have been used in their construction. As far as operation is concerned, equipment powered by renewable energies or low-carbon forms of energy are required. The circular economy should be encouraged by using recyclable materials.

Low-energy consumption building

A low-energy consumption building (one that has been certified as a bâtiment basse consommation in accordance with France's 2012 thermal regulation) is a building whose conventional primary energy consumption for heating, cooling, ventilation, domestic hot water production and lighting purposes is less than 80% of normal regulatory consumption (i.e. 80 kWh PE/m²/year). In 2013, BBC certification for new buildings was phased out in France, and has now been replaced by the new thermal regulation. For existing buildings, BBC Effinergie Renovation certification can be obtained following the completion of major renovation work.

M

Micro-cogeneration

Very low-power electrical cogeneration system (under 36 kW).

Mini-cogeneration

Low-power electrical cogeneration system (between 36 kW and 250 kW).

Ministry for the Ecological and Inclusive Transition

Created in May 2017, this French Ministry is responsible for drafting and implementing government policy on sustainable development, the environment, green technologies, the energy transition, preventing technological and natural risks, transport, equipment and the sea. It is also responsible for promoting and developing the social and inclusive economy, as well as managing international relations on climate issues.

Mobility credit

The “mobility credit” scheme is a solution available to company employees, resulting in more effective management of its vehicle fleet. Essentially, there are several variants of the mobility credit scheme: an employee can decide to change car, and choose a smaller model (in which case, the price difference is paid to the employee); the employee can opt to hire a vehicle on a one-off basis, or use car-sharing whenever possible; the employee completely gives up their company car, in which case they receive a significant mobility credit. The main benefit is to encourage more efficient management of the company’s vehicle fleet: car-sharing, purchase of smaller or less polluting cars, purchase of scooters.

Multi-annual Energy Plan

Five-year tool for managing energy policy and implementing France’s national low-carbon strategy created by the energy transition law to boost green growth. It applies to mainland France and to overseas regions and territories, namely Corsica, Reunion Island, French Guyana, Martinique, Guadeloupe, Wallis and Futuna and Saint Pierre and Miquelon. Mainland France’s multi-annual energy plans are produced by the government, while the multi-annual energy plans of overseas regions and territories are co-produced with their local authorities.

National Allocation Plan

In the years immediately following the introduction of Europe’s CO₂ quota system, the free allowances allocated to facilities were calculated by each member state based on common European rules. This was the NAP, or the National Allocation Plan. Since 2013, the method used to calculate free allocations has been strictly set at European level, and member states now have practically no margin for manoeuvre. However, people still sometimes talk about the NAP when they are referring to the quota system.



National low-carbon strategy

France's roadmap for tackling climate change, providing a set of strategies for delivering – in all sectors – the transition over to a low-carbon, circular and sustainable economy. It defines the trajectory for reducing greenhouse gas emissions in France until 2050, and sets short- and medium-term targets: carbon budgets. It has two aims: achieve carbon neutrality by 2050 and reduce the carbon footprint of people's consumption in France. Adopted for the first time in 2015 (Stratégie Nationale Bas Carbone 1), it is in the process of being revised (as is the multi-annual energy plan, which is linked to it and which implements it on a sector by sector basis).

Negawatt

Non-official unit to measure the amount of energy not used (watts not used) through energy conservation methods. Such reductions come about as a result of technological innovation or changes in behaviour.

Non-financial performance statement

Information provided by a company about its social, environmental, societal and governance activities, making for greater transparency in relation to its business, its characteristics and its organisational structure. Resulting from the transposition of the European directive of 22 October 2014, only large companies employing more than 500 people with total assets of more than €20 million or turnover greater than €40 million are required to provide such a statement.

Non-financial reporting

See CSR report, page 17

Information provided by a company about its social, environmental, societal and governance activities, making for greater transparency in relation to its business, its characteristics and its organisational structure.

Non-hazardous waste

How non-hazardous waste is treated depends on what type it is. Here are some examples: wood waste, cardboard waste, furniture and clothing waste, packaging waste, agricultural supply waste, old tyres, paper, building waste, public works waste, organic waste from major producers, household organic waste, waste from economic activity.

A large, stylized white letter 'O' is centered within a teal-to-green gradient square. The 'O' is composed of two concentric white outlines.

Obligee

Company which, within the framework of the Energy Savings Certificate scheme, sells energy, or which has to help its clients reach an energy savings target.

Own consumption

Scheme whereby an electricity producer can consume what they produce, benefiting from a purchase obligation tariff or compensation for the share of electricity that they do not consume themselves. An own-consumption system must always be connected up to the public electricity power grid. It is therefore distinct from “closed electricity distribution networks” or “internal building networks”.

Own consumption - collective

Under a bill passed in France in 2017, people can band together in order to produce and consume their own electricity (often generated using solar panels). Collective own consumption is not exclusively for local authorities. Social landlords, people in co-ownership buildings, schools and companies can all set up their own collective own consumption schemes, provided they group together as a legal entity and are geographically close to one another.

Own consumption - individual

Individual own consumption involves using all or part of the energy that one produces (mainly photovoltaic in origin, and either as it is generated or after a storage period), all at the same given site. Photovoltaic installations are connected up directly to the internal electrical installation. In the 2000s, the introduction of the purchase obligation scheme made it possible for people to sell all the energy they produced or just the surplus at a tariff set by the French government. Any unused electricity is injected into the grid and can then be resold.



A B C D E F G H I J K L M N O **P** Q R S T U V W X Y ZP

Paris Agreements (COP 21)

Drafted at the 21st United Nations Climate Change Conference in 2015 (COP 21) – the Paris Agreements ratified the need to keep average global temperature increases below 2°C compared with pre-industrialised levels and to take action to limit increases to 1.5°C by 2100 in order to reduce the risks and impacts associated with the consequences of climate change.

Partnership agreement (e.g.: PPP or Public-Private Partnership)

Administrative contract via which the State or a public state-owned establishment entrusts – to a third party for a predefined period based on the investments' amortisation period or the chosen funding methods – an overall mandate the purpose of which is to build or transform, service, maintain, operate or manage infrastructure, equipment or immaterial assets needed for public service, together with all or part of their financing, except for any stake in the capital.

Performance Energy Management

Performance Energy Management (PEM) is a system or organisational structure for managing the energy performance of a building or process. Whatever the mode of acquisition used (connected objects, centralised technical management, computer-assisted maintenance management, etc.), energy consumption data is then presented as performance indicators. Performance Managers then configure alerts and conduct regular monitoring operations, engaging in discussion with managers so as to optimise performance (energy, maintenance and technical). A PEM detects electricity consumption at weekends, for example. The analysis it conducts with users reveals any lights that have been left on. Consumption can then be reduced by implementing triggers which automatically switch the lights off at 8 PM on Friday evenings.

Photovoltaic (PV) power

Renewable electricity generated by converting the sun's rays, using photosensitive cells referred to as "photovoltaic cells". This electricity can then be consumed directly (own-consumption), stored in accumulators or injected into the national electricity grid.

"Planet, People, Profit"

Also referred to as the "*triple bottom line*", this is an accounting framework that was invented by UK business writer John Elkington in 1994, transposing the three fundamental pillars of sustainable development (the planet, people's well-being and profitability) into a corporate context. It sets out to incorporate measurements of a business's social and environmental impact into assessments of its performance – in addition to traditional economic criteria.

A large, stylized white letter 'P' is centered within a square gradient background that transitions from light blue at the top to light green at the bottom.

Prevented emissions

Cut in emissions achieved by an activity, a product and / or a service compared with a benchmark.

Primary energy

Energy present in natural resources (coal, crude oil, natural gas, uranium, wood energy, biogas, etc.) before they are processed in any way.

Product Environmental Profile (PEP)

Type III environmental declarations as described in ISO 14025, specifically for electrical, electronic and climate engineering equipment.

Prosumers

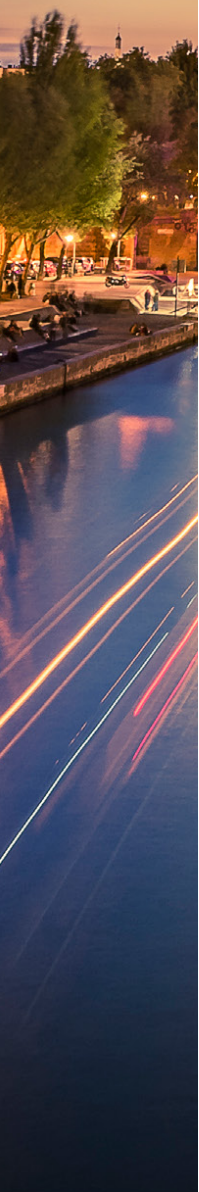
The term *prosumer* is a portmanteau of the words “provider” and “consumer”. It is used in particular in relation to the production of electricity by solar panels.

Public electricity grid tariff

Regulated remuneration for transmission grid and power distribution system operators in a monopoly situation. The calculation formula is reassessed every four years, but prices change every year. They are set based on calculations performed by the French Energy Regulatory Commission.

Public Service Delegation (PSD)

A Public Service Delegation is a contractual arrangement under which a legal entity governed by public law entrusts management of a public service for which it is responsible to a public or private delegatee, whose remuneration is substantially linked to the results of its operation of the service. With the PSD model, a private company’s expertise can be used to help deliver the energy transition – in water or waste management, for example. It comes under the concession category, as understood by EU law and the public procurement code (works and services concession or leasing).



R

Rainwater collection

In France, only rooftop runoff rainwater can be collected and stored in tanks buried beneath the ground or in water butts. Adding antifreeze is strictly prohibited. Rainwater can be used freely outside of people's homes, for watering the garden or cleaning a vehicle, for example. Using it inside the home is subject to strict regulations. It can only be used for toilet flush systems, for cleaning floors and for washing laundry, subject to a town hall declaration and provided certain obligations are complied with.

RARE network

Réseau des Agences Régionales de l'Energie et de l'Environnement (network of regional energy and environment agencies). A network of agencies and organisations which work in the public interest in the field of sustainable development across regions throughout mainland France, as well as in its overseas territories. As such, it serves as a link between energy and environmental issues among various stakeholders operating in the sector throughout France.

RE 2020 (draft)

Environmental Regulation (2020) applied to new buildings designed to reduce their carbon impact and improve their energy performance. Within the framework of future regulations that are less focused on heat and more focused on the environment (RE 2020 - currently under development), improving a building's energy performance will involve a progressive system to reduce its requirements and increase the efficiency of its systems so as to reduce its consumption; using renewable energies to reduce a building's consumption of non-renewable energies, helping to change the energy mix and assessing the building's carbon footprint (category C) throughout its life cycle (life-cycle assessment).

Recovery heat / Waste heat

Recovery heat or waste heat is heat generated by a process the primary aim of which is not to generate heat, and which is not recovered. Waste heat can be reused directly, or it can be used after it has been concentrated and / or stored so as to improve a process, heat a place or objects, for cooling or to generate electricity. There are many sources of waste heat. They can include energy production sites (nuclear power plants), industrial production sites, certain tertiary buildings or Waste-To-Energy plants (also referred to as household waste incineration plants). Generally, the energy and environmental efficiency of a system that involves heat production needs to be improved.

R

Recycling

Industrial or household waste treatment process whereby certain reusable materials are reintroduced into the production cycles of new products. The most frequently recycled materials are glass, cardboard, paper, certain types of metal and certain types of plastic. Recycling is a way of avoiding natural resources and energy being wasted. It also bolsters supplies of raw materials for use in industry and reduces impacts on the environment.

Refrigerants

A refrigerant is a pure fluid or a mixture of pure fluids in the liquid or gas phase, or in both phases, depending on their temperature and pressure. The key property of a refrigerant is its ability to evaporate at low temperatures under atmospheric pressure. Refrigerants are used in refrigeration systems (air-conditioning systems, freezers, refrigerators, etc.). The Montreal Protocol has demonstrated that a number of refrigerants are responsible for ozone depletion. But they can be replaced by low-carbon refrigerants which have a GWP (Global Warming Potential) of under 150, meaning a lower environmental impact.

Relamping

Operation that involves modernising a lighting system and replacing old-generation halogen or compact fluorescent bulbs with ones that are more technologically high-performance - such as LEDs - which can lead to significant energy savings.

Remaining carbon budget

The remaining carbon budget is a concept that was invented by the IPCC, which defines it as: "Estimate of net cumulative anthropogenic CO₂ emissions generated since a given start date until anthropogenic CO₂ emissions reach net zero, the most likely result of which would be to keep global warming at a given level, factoring in the impact of other anthropogenic emissions". Given the fundamental differences between countries, the scientific community has attempted to divide the global carbon budget up into national emissions budgets. For example, within the framework of its national low-carbon strategy, France has a carbon budget of 422 million tonnes of CO₂ equivalent / year for the period running from 2019 until 2023.

Renewable and Reclaimed Energies

These energies are "clean" energies, in the same way that solar, biomass and wind power are clean. As their name would suggest, using reclaimed energies involves reclaiming or recovering energy which by default would be lost. First of all, all the waste which could be hazardous or recycled is identified and then removed. When this sorted waste is combusted in a furnace, it releases considerable heat, which produces steam. This steam is then channelled into a pipe network and converted into energy. It can be used to power a district heating network.

R

Renewable electricity purchase obligation

Obligation requiring EDF or any other local operator to purchase electricity produced using renewable means at a tariff fixed by the law from French producers falling within the scope of the law.

Renewable energies

Multiple energy sources resulting from a natural process, such as the wind (wind power, wave power), the sun (thermal, photovoltaic, thermodynamic power), the Earth's heat (geothermal power), water (hydropower, tidal power), biodegradation (biomass), biofuel, hydrothermal (calories in bodies of water). Unlike fossil fuels, renewables can be renewed over a human timescale.

Renewable energy community

European legislation now grants communities and private individuals the right to produce, store, consume and resell their own energy. In Europe, the energy produced by renewable energy communities has considerable potential. The recent EU renewable energies directive sets forth and defines the concept of a “renewable energy community”. Such communities are legal entities (according to applicable national law) and are based on open and voluntary participation. They are autonomous and are effectively controlled by shareholders or members who are located near renewable energy projects owned and developed by that community. The shareholders or community members are private individuals, SMEs or local authorities. The “community’s” primary purpose is to provide environmental, economic or social benefits for its members, rather than financial profits.

Renewable energy intermittency

Inability of renewable energies to produce energy on a constant basis.

Renewable heat

Renewable heat is one of the mainstays of the energy transition. Local sources of renewable heat – such as wood-energy, biogas, heat recovered from industrial processes, energy from waste, geothermal and solar power – can be used to meet requirements (nearly half of all energy consumption in France). France's energy transition law for green growth stipulates that by 2030, 38% of final heat consumption must involve heat generated by renewable sources.

Renewable refrigeration

Networks over which refrigeration produced using renewable energy sources is transported, in the form of chilled water, and used for the air-conditioning systems of tertiary buildings.

R

Residual emissions

Irreducible greenhouse gas emissions that are currently considered unavoidable, or which could only be reduced at a prohibitively high cost.

Responsibility for climate inaction

New area of legal responsibility that is gradually taking shape since the emergence at the end of 2018 of litigation against governments and companies for “climate inaction”. It foreshadows a new key area of environmental responsibility.

Responsible procurement

Responsible procurement involves incorporating environmental and social criteria into purchasing, and giving consideration to life cycle. Since procurement accounts for an average of 50% of a company’s turnover, responsible procurement is an effective means of implementing a sustainable development policy.

Reuse

Operation whereby a product is given or sold by its owner to a third party who gives it a second lease of life. If a product is reused, it is not wasted: it is used once again for the same purpose as the one for which it had been originally designed. Reusing products helps extend their useful lives, contributes to the circular economy and helps reduce waste.

Roof terrace

Flat roof to which users may – or may not – have access (living area, garden, shared vegetable garden, solarium, etc.).



S

Science Based Target (SBT)

Set of methodologies all designed to calculate the remaining carbon budget so that the 2°C (or 1.5°C) threshold is not exceeded, and which allocate this carbon budget to various sectors.

Scopes 1, 2 and 3

Scope within which the greenhouse gas emissions of an organisation or product are analysed. Scope 1 emissions are direct emissions from fixed or mobile combustion sources; scope 2 emissions are indirectly generated (from consuming electricity, steam, heat or refrigeration); scope 3 emissions are indirectly generated by upstream and downstream activities not directly related to production.

Shared Energy Advisor

The Shared Energy Advisor is a scheme created by the ADEME: municipalities of fewer than 10,000 people in the same region can pool the services of a Shared Energy Advisor. There is currently a national network of some 130 Shared Energy Advisors. Once the energy advisor has produced a comprehensive energy assessment of the member municipalities, they submit an overview of their assets and energy spending to the elected representatives. They also monitor the commune's consumption, support projects and implement awareness-raising initiatives.

Short distribution channel

A short distribution channel is a means of selling agricultural products that involves the producer selling direct to the consumer, or indirectly, provided there is not more than one intermediary between the producer and the consumer. Examples of the producer selling direct to the consumer include: products sold at farms (products in baskets or picked, farmers markets), collective selling (group sales outlet or group basket), or products sold at markets, as part of visits or at people's homes, etc.

Significant Energy Use (SEU)

Notion defined by the ISO 50001 standard on energy management systems. The standard defines SEU as energy use that represents a significant share of the energy consumption and/or a considerable potential for improving energy performance.

Smart building

Building that uses sensors for obtaining numerous pieces of data (such as temperature, relative humidity, sound levels, whether or not there are people in a given area, etc.) so as to optimise its resources, but without compromising user comfort.

S

Smart city

Smart cities are certain types of urban development designed to keep pace with the changing (or emerging) needs of institutions, companies and people, from an economic, social and environmental perspective. By using technologies for information and communication, smart cities facilitate mobility (of people, goods and data), create a sustainable environment and guarantee responsible urban development.

Smart grids

Smart electricity distribution networks that enable information to be shared between suppliers and consumers so that electricity flows can be adjusted in real time and the electrical grids can be managed more efficiently.

Soft mobility

Set of mobility modes that do not harm the environment or contribute to climate change. “Active” modes of mobility come under this umbrella - which are based on using the body’s muscular power and which do not emit CO₂ (bicycle, scooter, rollerblades, walking, etc.), as well as shared mobility modes (car-pooling, public transport, etc.) which limit individuals’ carbon footprints over long distances.

Solar thermal energy

Use of thermal energy from the sun’s rays to heat a fluid (liquid or gas). The energy received by the fluid can then be used directly (domestic hot water, heating, etc.) or indirectly (producing steam to drive alternators, thus generating electricity, producing refrigeration, etc.).

Solid Recovered Fuel

Solid recovered fuel (SRF) is fuel that is solid, dry and clean, made from non-hazardous waste that it has not been possible to sort and recycle. It is used for generating electricity in incineration or co-incineration plants. By producing SRF from non-recyclable waste, up to 98% of household waste or non-hazardous industrial waste can be used. This significantly reduces the volume of final waste that has to be buried in storage centres. The SRF produced is then used by industrial facilities that consume a great deal of energy (such as cement factories), mixed with other fuels.

Stakeholders

Set of people involved in what a company does, who play a part in its economic aspects (employees, clients, suppliers, shareholders), who observe it (unions, NGOs) and who are more or less directly influenced by it (civil society, local authority, etc.).

S

Storage (electricity, hydrogen)

The act of storing a quantity of energy from a source at a given location for use at a later date.

Subsidy

Financial help given through public funds, without the entity which provides it expecting anything in return: for example for developing renewable or recovered energies, undertaking energy audits or acquiring an electric means of transport (bicycle, vehicle, etc.). Energy Savings Certificates do not constitute a subsidy.

Sustainable building / Sustainable construction

A sustainable building is a building that has a lower environmental impact, lower CO₂ emissions, a more healthy environment and uses energy more efficiently. A number of certifications are available to companies wishing to certify their buildings as sustainable. The following can be obtained: HQE (Haute Qualité Environnementale or High Environmental Quality), HPE (Haute Performance Energétique or High Energy Performance), THPE (Très Haute Performance Energétique or Very High Energy Performance), BBC (low-energy consumption), and classification as passive or positive energy buildings.

Sustainable Building Plan

Launched in 2009, France's Sustainable Building Plan brings together a wide network of corporate and economic stakeholders from the building and real estate sectors to focus on a shared aim: encourage implementation of energy efficiency and environmental solutions in order to achieve targets that have been set. It is supported by a permanent team that reports to France's General Secretariat for Development, Housing and Nature.

Sustainable Development

Development policy designed to reconcile the need to protect the environment with economic efficiency and social justice, so as to meet the needs of people today without compromising the ability of future generations to meet theirs. Adopted in September 2015 at a UN summit, the 17 Sustainable Development Goals (intended to be achieved by 2030) and their 169 targets came into force on 1 January 2016.

Sustainable Development Goals (SDGs)

This is the collection of seventeen goals covering all fundamental aspects of human development (health, education, growth, peace and solidarity, climate, biodiversity, etc.). They were set by the UN in 2015 and have been adopted by all member countries. They form the core of Agenda 2030, a joint programme of actions designed to make the world more sustainable by 2030.



“Tertiary” law

Also referred to as the tertiary renovation law, this is a law pertaining to the renovation of tertiary buildings of more than 1000 m² which sets forth the conditions under which France’s Elan law should be applied (law on changes in housing, development and digital technologies, enacted in 2018). The law is designed to bring about a reduction of at least 40% in final energy consumption by 2030, then 50% in 2040 and 60% in 2050 (compared with 2010 levels). It therefore requires that the energy consumption of France’s building stock be both measured and reduced. Initiatives focus on building energy performance, installing high-performance equipment and systems for managing and controlling this equipment, procedures for operating equipment and adapting premises so that they use energy more economically. The law came into force on 1 October 2019.

Thermal bridge

Weakness in a building’s insulation which enables cold or heat from the outside to penetrate, thermal losses from the interior to the exterior, or the transfer of humidity and formation of condensation. Thermal bridges are most frequently found in joinery or where building components meet (between walls and a roof, between floors and walls, etc.).

Thermal insulation

Improving the energy performance of a building and minimising its heat losses, as well as reducing the energy that it consumes, through the use of certain materials and by using certain techniques (insulating the roof, loft, interior and exterior walls, etc.).



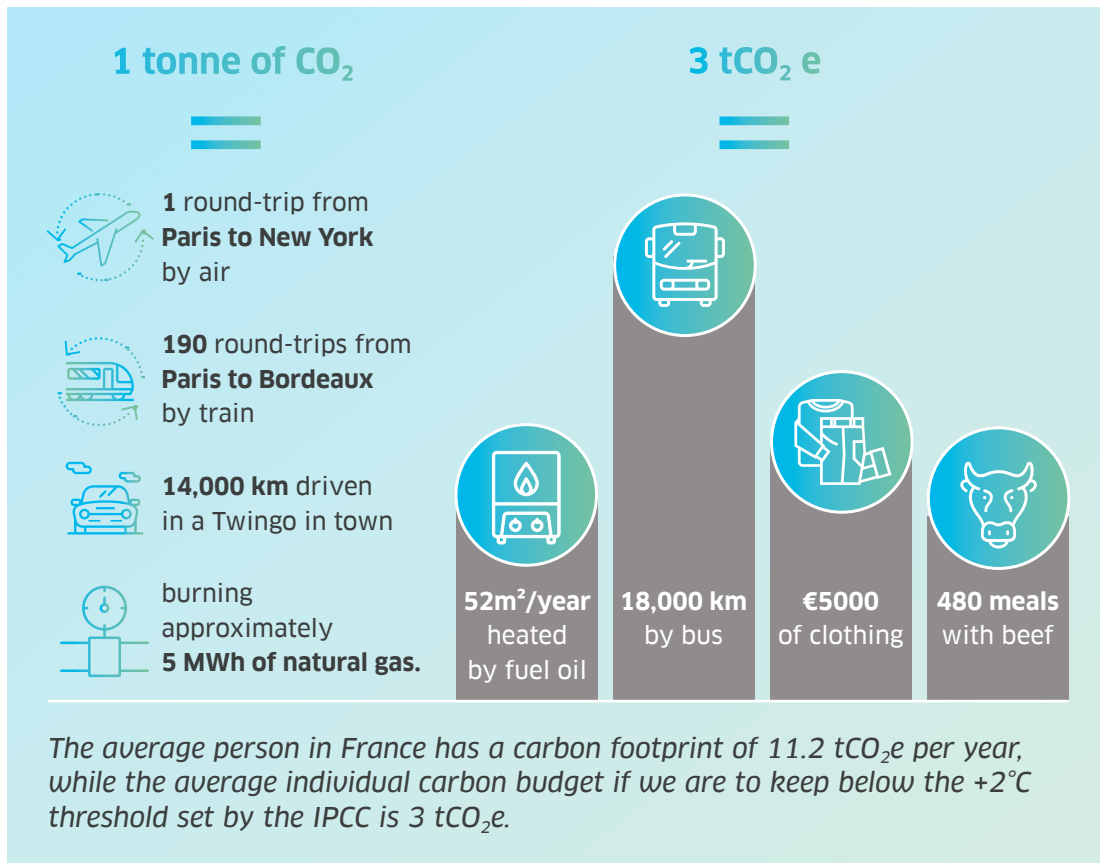


Thermal sieve

Buildings, in particular people’s homes, with excessively high levels of energy consumption due to them being improperly insulated and having inappropriate equipment. Currently, no quantified definition exists, but consultation is under way to set a threshold. The Energy-Climate law has made doing away with thermal sieves one of its key priorities.

Tonne of CO₂ equivalent

Unit of reference for climate plans and quantifying greenhouse gas emissions. CO₂ is one of the primary greenhouse gases, and the others are converted into “tonnes of CO₂ equivalent” (or “tCO₂e”), based on their global warming potential (or GWP).



TR 2012

Thermal Regulation (2012) currently in force that limits average primary energy consumption of new buildings to a maximum of 50 kWh PE/(m²/year). TR 2012 made low-consumption buildings more widespread and divided the energy consumption of new buildings by three compared with the previous regulation. Its “SECTION V” encourages buildings to connect to “virtuous” heating networks (in which renewable energies account for more than 50% of power).

U

Unavoidable energy

Quantity of energy that is inevitably present or trapped in certain processes or products, at least some of which can sometimes be recovered and / or used.

Urban and peri-urban agriculture (UPA)

Using land to grow a limited number of crops and just-in-time management of foodstuffs have resulted in our agricultural systems being less resilient. Nowadays, most towns only have enough food for a few days in the event of an environmental, economic or financial shock. This means that the “countryside” needs to have a presence in city centres. This movement is known as urban and peri-urban agriculture, and involves several types of production system (conventional, industrial, integrated, biological, biodynamic, permaculture, above-ground and in-the-ground). UPA also helps to protect the planet’s biodiversity.

Urban cooling networks

Based on the same model as urban heating networks, cooling networks provide refrigeration for buildings connected up to them at a given site, or in a district or town. Urban cooling networks meet regions’ various targets by reducing CO₂ emissions and preventing the urban heat island phenomenon – particularly during summer heat waves. They can also make use of local resources and assets. Urban cooling networks can be powered by renewable or recovered energies.



U

Urban Heat Island (UHI)

Localised areas in urban environments with temperatures that are higher than neighbouring rural or forest areas, or average regional temperatures. These heat islands are artificial microclimates created by human activities (energy plants, heat exchangers, etc.) and urban development (dark surfaces which absorb heat, such as tar). A scientific study published by Nature Climate Change suggests that by 2100 - if no action is taken - 5% of the world's most populated towns and cities will see temperatures of up to 8°C higher than normal. UHIs have gone from being annoyances to presenting a health risk. They are now at the forefront of political and social initiatives, particularly ones which set out to prevent the potentially dramatic consequences of heatwaves.

Usage transfer

Action of substituting a given type of energy consumption for another, in order to meet the same requirement (or switching from a form of energy that is a high emitter of greenhouse gases, such as energy derived from burning petroleum products, to one that is carbon-free or almost carbon free (carbon-free electricity, gas, biofuels) within the framework of an initiative to tackle climate change and reduce greenhouse gas emissions).

Useful energy

Share of final energy that is actually used to meet subscribers' requirements.



V

Vehicle to grid

System whereby rechargeable electric vehicles (battery-powered electric vehicles, hybrid rechargeable vehicles or vehicles powered by hydrogen fuel cells) communicate with the power grid. This means that they can be recharged, but they can also inject electricity into the network.

Virtual Power Plant

Network of medium-sized decentralised electricity generating units, such as wind farms, solar farms and cogeneration units, together with consumers and flexible storage systems. Network for relieving the load by smartly distributing the power generated by individual units during peak periods.

Visual pollution

This refers to all eyesores which harm our living environment and landscapes (such as plastic bags caught in trees or in high-voltage cables).

Voluntary waste drop-off point

Collection points at which residents voluntary drop off their waste in special containers. These special selective-sorting containers (for glass, household rubbish and separate collections) can be buried to make them more aesthetically integrated.



W

Walk the talk

Network of companies collaborating and working together in pursuit of the same goal and actually implementing what they are advocating, particularly in relation to the energy transition.

Warm water circuit

The principle of a warm water circuit (or cold water circuit) is based on the distribution of low-temperature water to building substations connected up to it. Heat pumps are installed at these substations for producing hot water used for heating and domestic needs, as well as cold or chilled water for refrigeration and air conditioning, if required.

A warm water circuit can be supplied by multiple energy sources which can all be pooled together as part of the same circuit: water recovered from wastewater networks, geothermal power, water recovered from refrigeration units. Heat losses from this type of network are negligible.

Waste

Waste is defined as any residue from a production or transformation process, any residue resulting from usage, any substance, material, product or more generally any item that has been abandoned or that its owner intends to abandon.

Waste Electrical and Electronic Equipment (WEEE)

Waste from electrically-powered equipment (or powered by electromagnetic fields) at voltages not exceeding 1000 V AC or 1500 V DC.

Waste fund

Fund (renamed the “Circular Economy” fund) managed by the ADEME for supporting operations to help achieve the objectives of the new waste policy, defined by the energy transition law for green growth, which came into force on 17 August 2015 in France. The waste fund had a budget of €155 million for 2018.

Waste recovery

A process where waste material is transformed into another product, piece of equipment or energy. That waste then serves a useful purpose as you are using fewer natural resources.



Watt (kW, MW, TW)

Unit of power for an energy system, defined as a derived unit of 1 joule (unit used to qualify energy, work and heat quantity) per second. It is used to quantify the rate of energy transfer. 1 kW (kilowatt) = 1000 watts, 1 MW (megawatt) = 1 million watts, 1 TW (terawatt) = 1 trillion watts.

Watt-hour

Unit of energy measurement equal to the energy produced by 1 watt of power sustained for one hour. More often than not, people talk in terms of MWh (for a home) or GWh (for a heating network) over a period of 12 months.

Wood-energy

Wood-energy is a type of bioenergy derived from biomass. Mainly used as a primary fuel, wood-energy is being increasingly processed by industry into fuel byproducts (liquids, gases or solids). Although considered a renewable form of energy, it contributes significantly to air pollution compared with other fuels. In particular, burning wood creates significantly more suspended particles than burning other types of fuel, such as natural gas. The community facilities that we operate are subject to strict smoke controls and so feature sophisticated filtration systems.



Z**Zero carbon / Net zero emissions**

Point of equilibrium to be achieved between anthropogenic greenhouse gas emissions and their removal from the atmosphere by people or their actions. The differential between the gases emitted and the gases removed from the atmosphere would then be equal to zero. This is also referred to as “carbon neutrality”.

Zero net artificialisation

Aim of restoring the planet's biodiversity by limiting the artificialisation of soils (with concrete, asphalt, etc.).

Zero waste

Initiative that sets out to minimise waste production, or to review consumption patterns in order to reduce waste produced at source, instead of simply incorporating recycling into people's lifestyles more effectively.

“Zero-carbon” package

Set of services for reducing greenhouse gas emissions at source (or even in certain cases contributing to global carbon neutrality by supporting CO₂ reduction or sequestration projects), thus helping to achieve global or regional climate transition goals.



Sources:

ADEME

World Wild Fund for Nature

The Green IT Club

The Shift Project

FEDENE

France's Ministry for the Ecological and Inclusive Transition (ecologie.gouv.fr)

France's Ministry for Regional Cohesion and Relations with Local Authorities (cohesion-territoires.gouv.fr)

2018 and 2019 SNCU reports (Syndicat National du Chauffage Urbain – France's national district heating syndicate)

District heating user guide

Wikipedia

White Paper on low-carbon buildings – ENGIE Solutions

Fédération Nationale des Collectivités Concédantes et Régies – France's national Federation of licensing authorities

AMORCE network

www.actu-environnement.fr

www.batiactu.com

www.legifrance.gouv.fr

www.marche-public.fr

www.certivea.fr

