

2023 METHODOLOGICAL NOTE OF ENVIRONMENTAL REPORTING

EXTRACT FROM 2023 UNIVERSAL REGISTRATION DOCUMENT



The logo for ENGIE, featuring a white curved line above the word "ENGIE" in a bold, white, sans-serif font.

3.5.3 PERFORMANCE CONTROL AND MEASUREMENT SYSTEMS, A PREREQUISITE FOR ENVIRONMENTAL RESPONSIBILITY

To monitor the implementation of its environmental policy, control environmental risks and encourage the communication of its environmental performance to stakeholders, ENGIE implements a specific reporting system which takes into account the Global Reporting Initiative (GRI) recommendations.

Environmental reporting is closely tied to operational performance reporting, thus becoming a management tool. The Group's Executive Committee transmits this goal of making environmental concerns an integral part of management responsibilities.

3.5.3.1 Methodology elements

Organization and scope

ENGIE conducts its environmental reporting using a dedicated tool that allows data to be reported following a defined methodology. This tool, called EARTH, is an environmental reporting IT solution used to manage the network of environmental correspondents and coordinators; to handle the management and documentation of the scope of environmental reporting; to manage data entry, monitoring and consolidation of indicators; to draft reports; and to provide the documentation necessary for producing and collecting data (reporting procedures and instructions). EARTH covers the entire ENGIE Group.

The legal entities included in the **reporting scope** are those whose operations are relevant in terms of environmental impact and that are consolidated fully or proportionately under the rules of financial consolidation (IFRS). Legal entities whose sole business is energy trading, financial activity or engineering are therefore excluded from the scope, as are legal entities consolidated using the equity method. The entities included in the reporting report on the performance and impacts of the industrial facilities over which they have technical operational control, including facilities operated on behalf of third parties. Nevertheless, ENGIE is rolling out its comprehensive survey of the entities consolidated by the equity method of the GBU Energy Solutions and the GBU Networks to acquire environmental-based information from a wider scope. For the entities consolidated by the equity method of the GBU Renewables, the GBU FlexGen and Nuclear, ENGIE includes primary energy data on the Group's operational performance (Perform tool). The data of entities consolidated by the equity method is only presented in the Scope 3 reporting of the Group's greenhouse gas emissions report. It should be noted, however, that the electricity capacities of entities consolidated by the equity method are also taken into account at 100% in the objective relating to the percentage of renewable energy in the electricity production capacity mix presented in Section 1.5.2.

Thus, in accordance with the rules of **financial consolidation**, 100% of the impact data collected is consolidated when the entities are fully consolidated. For joint venture entities, the environmental impact data are consolidated in proportion to the Group's consolidation rate provided that it has 100% technical operational control or that, as a minimum, this is shared with other shareholders.

For **disposals** occurring during the year, the entities concerned complete the environmental questionnaire with the data available as of the last day of the month preceding the disposal. If it is not possible to collect all the environmental indicators, they are extrapolated on the basis of the main activity (for example, energy production for a power plant) and historical data. For **acquisitions** made during the year, it may happen that their environmental management system is not sufficiently mature to meet all the environmental indicators. In this case, the missing indicators are extrapolated on the basis of the main activity and indicators available in entities with a similar technical profile. A correction of these extrapolated values can be made a posteriori the following year, at the end of the first full fiscal year.

To **calculate environmental management indicators** such as the "share of relevant revenues covered by an environmental certification, an environmental crisis management plan, etc.," the relevant revenues is estimated for each legal entity. To obtain the relevant revenues, operations regarded as "not relevant in terms of environmental impact" (e.g. trading, finance and engineering) are stripped out of the consolidated revenues figure for each legal entity.

Procedures and guidelines are rolled out Group-wide via a network of environmental contacts and coordinators. These procedures and guidelines at Group and regional or country level describe in detail the environmental data collection, control, consolidation, validation and transmission phases at the different levels of the organization, as well as the rules for defining the scope of consolidation. They include technical documents that provide methodological guidelines for the calculation of some specific indicators. Depending on its activities, each entity is assigned a profile that determines the indicators to answer. The list of the entities included in the scope of environmental reporting is approved by each region or country.

The **definitions of the indicators** used to measure the environmental performance of Group businesses have been revised based on comments made by the Statutory Auditors. They also take into account the comments by line managers represented in dedicated work groups. All the documentation is available from the Group upon request (CSR Department).

Until 2016, ENGIE would provide a "**coverage rate**" for each indicator published, corresponding to the response rate obtained from all the entities surveyed. Since 2017, with the implementation of the EARTH reporting tool, the coverage rate has been 100% for all indicators.

A certain number of methodological choices have been made to carry out the environmental reporting. These are described in the following paragraphs.

Reliability of the scope of environmental reporting, environmental impact of subcontractors and ENGIE's commitment to water conservation

- The **reliability of the scope** of environmental reporting is a priority for ENGIE, which is evolving in an international context of business disposals and acquisitions. Before every reporting campaign, the financial scope for consolidation is compared against the information fed back by each regional hub's environmental managers in order to check which industrial entities contributing to EARTH report to which financial entities. Moreover, reconciliations site by site are carried out using the Perform tool, ENGIE's database which is dedicated to the operating performance of energy production facilities, to carry out an additional verification of the comprehensive nature of the scope. Reporting is also requested from correspondents to verify and report the number of sites belonging to each contributing entity.

- Significant **environmental impacts** resulting from subcontractors during services performed at one of the Group's facilities must be included in the Group's impacts except when a specific contractual clause provides that a subcontractor is liable for impacts generated at the site while providing the service. Data provided by subcontractors is not subject to systematic internal verification before being included in Group data and is the responsibility of the subcontractors alone. Regulations and legal obligations related to the environment may differ from

3.5.3.2 Indicators

Non-GHG indicators

- NO_x, SO_x and fine particulate matters emissions are calculated locally on the basis of measurements. If discontinuous measurements are taken on a site, an average of the measurements over the last five years is taken where possible to avoid inconsistencies related to one-off measurements. For facilities burning natural gas that do not have automated measurement systems, a calculation method is provided for NO_x emissions and a default emission factor for SO_x (0.281 g / GJ LHV) and an other for fine particle emissions (0.9 g / GJ LHV) have been set up, both factors are recommended by the European Monitoring and Evaluation Programme - EMEP.
- As it is concerned about what becomes of the waste generated by its activities, the Group has indicators on the production and recovery of the waste generated by its activities. These are based on definitions of waste and recovery established by local regulations. To avoid erroneous data about stock, only the tonnages taken away and weighed on site are reported as disposed of. The tonnages that must be reported are wet or dry, depending on the way they are disposed of: if the waste disposed of was wet, the reported tonnages are wet and the converse for dry waste. As an exception, if the waste is permanently stored on site, the associated dry tonnages must also be reported as disposed of. In the latter case, the waste is never recovered. Waste generated by the construction or dismantling of facilities, by the repowering or upgrading of facilities, and by soil rehabilitation, are not covered by the indicators for waste generated by activities.
- ENGIE operates hydraulic installations, some of which have water tanks. Given the difficulties in modeling the evaporation of each site, the evaporated water is not yet included in environmental reporting.
- Since 2022, pumping storage stations have been recognized in the same way as batteries, as recommended by the European taxonomy. In this regard, electricity consumption corresponds to the difference between electricity supplied by the network and that returned to the network. The latter, as a result, is no longer accounted for under ENGIE's electricity production. This modification was applied with retroactive effect as from 2015 for the sake of consistency.
- For the sake of consistency, the factor for converting thermal power produced (GWh_{th}) into electric power (GWh_e) is set at 0.25 for incinerators and at 0.61 for all of the Group's procurement and energy production activities. This last factor was updated with retroactive effect as of 2015 on the basis of European Commission Delegated Regulation 2015/2402.
- The energy efficiency indicator covers fossil fuel and biofuel power plants. It also includes heat supplied by third parties as well as steel gases (see the note on heat and that on steel gases below). For sites supplied with heat, both the input and output are taken into account when calculating efficiency.

one country to another, and certain data may thus be sometimes more difficult to gather.

- Since 2007, ENGIE has been a signatory to the CEO Water Mandate, thus demonstrating its commitment to the **preservation of water resources**. The water indicators are consistent with the GRI indicators and fall into four categories: withdrawal, discharge, consumption, reuse / recycling. Since 2015, the materiality of the water indicators published has been reviewed and the Statutory Auditors verify the inputs, outputs and consumption of fresh and non-fresh water as well as total consumption.

- For open-loop energy production sites without a cooling tower, cooling water outflows are considered equal to cooling water inflows, corresponding to zero cooling water consumption due to the proximity of the river source or sea. For closed-loop energy production sites (heat networks), water make-up is considered a form of water consumption, thus maximizing the measurement of their water consumption.

GHG indicators: direct emissions (Scope 1)

- CO₂ emissions from the combustion of fossil fuels were calculated based on the most recent emission factors published by the IPCC (IPCC Guidelines for National GHG Inventories, Vol. 2 Energy - 2006). However, the emission factors for coal can vary greatly depending on the provenance. For this reason, each reporting entity consuming coal provides a locally calculated emissions factor. This also holds for alternative fuels for which it is not possible to use standard emission factors.
- The biomass and biogas consumed by ENGIE in its facilities generates energy that is counted as ENGIE production and, in accordance with conventions in this area, ENGIE counts CH₄ and N₂O emissions associated with their combustion when these fuels are used to produce energy but does not count CO₂ emissions.
- The Global Warming Potential (GWP) compares the warming capacity of the various greenhouse gases to CO₂. The GWP used to convert the Group's greenhouse gas (GHG) emissions to CO₂ equivalent are the latest GWP published by the IPCC (sixth IPCC Assessment Report - 2022), considered on a 100-year scale.
- ENGIE carries out residual gas recovery services for its steel producing customer ArcelorMittal. This service allows ArcelorMittal to meet the majority of its electricity needs and thus reduce its GHG emissions by avoiding a high level of energy use by the network. When analyzing the GHG emissions relating to these services, ENGIE has noted that 100% of the emissions relate to the steel manufacturing process. At the end of this process, regulations require that steel producers burn residual gases, generally through flaring. ENGIE only intervenes in this process to extract energy that would otherwise have been lost to flaring, by taking over for ArcelorMittal in the burning of the residual gases, but without generating additional GHG emissions. This is why ArcelorMittal's reporting methodology includes direct emissions from the external plants to which the residual gases are delivered for recovery. This state of affairs is confirmed by Law No.2019-1147 of November 8, 2019 on climate and energy and the related decrees which set the greenhouse gas emissions ceiling for fossil-fueled power plants. Decree No. 2019-1467 of December 26, 2019 states that "Emissions from waste gases used in electricity production facilities are not recognized." Consequently, ENGIE now excludes these GHG emissions from its Scope 1 and the DK6 power plants in France and the Knippegroen and Rodenhuize power plants in Belgium no longer report emissions associated with steel gases. As these are residual gases and not fuel with a supply chain, ENGIE does not include emissions from an upstream fuel chain in its Scope 3, with the exception of GHG emissions related to the

combustion of steel gases, all environmental indicators for these entities are included in the consolidated data, as well as their energy production which is included in the calculation of the Group's specific emissions.

GHG indicators: indirect emissions (Scopes 2 and 3)

- The nature of heating purchases accounted for under scope 2 changed since 2022. Heating from Energy Recovery Units (ERU) or non-ERU is no longer included in the calculation of Scope 2 emissions. ENGIE is therefore in line with French practices in this area, as set out in the methodology of the Syndicat National du Chauffage Urbain (the French national district heating syndicate - SNCU) in response to the annual survey on Heating and Cooling Networks. This survey serves as national statistics for the Ministry of Energy Transition and the basis of calculation for CO₂ content and the EnRR rate of each network published in the energy performance diagnosis decree. Heating purchases taken into account only relate to heating produced excluding ERU. Based on MWh purchased, an average loss rate of 16.5% supplied by the SNCU is used to recognize MWh of heat lost during transmission and calculate scope 2. In 2022, heating purchased generated excluding ERU represented 8.11% of all heating acquired. In the absence of historical data to distinguish between ERU heating and non-ERU heating, the same percentage has been applied retrospectively since 2015 for the sake of consistency.
- Two methodological changes have occurred since 2022 on Scope 2, with retroactive effect from 2015. These include the exclusion of recovered heat from ERU and the transition of pumped storage stations from the status of electricity production facilities to that of batteries.
- In 2023, two methodological changes were made to Scope 2. The first was the taking into account of losses on electricity transmission networks. The second was the addition of market-based Scope 2 in the reporting (in addition to the information related to location-based electricity networks). For market-based, a green emission factor is applied to electricity consumption for which the Group has certificates or guarantees of renewable origin. The country-specific electricity network emission factors for the calculation of "location-based" emissions and "green" emission factors are taken from the ENERDATA database and data from the European Network of Transmission System Operators for Electricity (ENTSO-E). Residual emission factors were calculated by our marketer, GEMS (Global Energy Management & Sales), based on AIB (*Association of Issuing Bodies*) data. The data used are the composition of the residual mix and its percentage in relation to the network
- In the "Use of sold products (fuels sold to end-consumers, off market)" indirect emissions category, the term "end-consumer" refers to customers who use the natural gas purchased themselves. Volumes sold to trading platforms, resellers, Local Distribution Companies or other intermediaries not owned by ENGIE are, therefore, excluded.
- For Scope 3, the category "indirect GHG emissions associated with energy" includes GHG emissions from the upstream fuel chain, the upstream chain of electricity and heat consumed and, since 2022, those from the upstream electricity chain purchased for resale. To calculate the latter emissions, emissions of the TWh sold are determined by first calculating the emissions from ENGIE's production. The emission factors used for this include the complete LCA, including the construction of the installations, except for combustion installations for which the factors are applied to their actual fuel consumption. This method is more precise than the calculation based on the LCA for this type of installation. These production emissions are then deducted from ENGIE's total sales in the countries concerned, calculated on the basis of European average factors including the complete LCA.
- Emissions in the "Investment" category correspond to direct emissions from energy production and those from other activities such as gas networks. In 2023, following the extension of the environmental data collection to the entities consolidated by the equity method of the GBU Energy Solutions and the GBU Networks, the "investments" category includes indirect emissions due to the purchase and consumption of electricity and heat. The emissions reported in this category of Scope 3 are the emissions of entities at the Group's ownership rate.
- For the category "uses of sold products," in addition to non-renewable fuels, sales of biomass and biomethane to end-users are now collected by calculating biogenic emissions. This last addition also makes it possible to supplement the emissions from the upstream chain of the two fuels biomass and biomethane.
- Although less significant CO₂ emissions calculated on the basis of Ways of Working are now integrated into Scopes 1, 2 and 3. Some categories are available over the three years presented in this chapter, others only for 2023.

(1) The share of energy production from non-fossil sources has increased by 121% in nine years, from 28.6% in 2015 to 63.2% in 2023.