THE EDF GROUP CLIMATE TRANSITION PLAN

The Intergovernmental Panel on Climate Change (**IPCC)** has established that the warming of the atmosphere, the ocean and the land surface observed since 1750 is "unequivocally" caused by human[1] activities. Faced with the climate emergency, the EDF Group wants to build, wherever it is present, a new energy model that emits less CO_2, is more efficient and more respectful of the environment and populations[2]. This is in fact its **raison d'être**[3].

Accordingly, the Group is implementing a **climate transition plan based on** three pillars, complemented by a **governance** component that meets the best practices recommended by the *TCFD[4].*

- **Reducing the Group's greenhouse gas emissions**
- **Adapting the Group's facilities to climate change**
- **Developing the use of low-carbon electricity**

REDUCING THE GROUP'S GHG EMISSIONS

Contribute to achieving carbon neutrality by 2050

The EDF Group is the world's leading producer of electricity with zero direct CO_2[5] emissions and, in relation to its production, the Group's CO_2 emissions are much lower than those of other major electricity producers. Nevertheless, the Group has made a commitment since 2018 to contribute to achieving carbon neutrality, in particular by reducing its direct greenhouse gas emissions to zero or close to zero by 2050.

Defining a CO2 emissions reduction trajectory

The Group has aligned its ambitions with the Paris Climate Agreement and has set greenhouse gas reduction targets for 2030 with a milestone in 2023, covering both its direct emissions (scope 1) and indirect emissions (scope 2 and 3). This target trajectory has been validated as "*Well Below 2°C*" by the *Science Based Targets* initiative.

SBTI objectives	Target 2030	Update to 2021
Emission reduction rate associated with the sale of electricity [6]	-50%	-28%
Rate of reduction of emissions associated with the sale of gas [7]	-28%	-24%

This trajectory corresponds to an absolute level of direct greenhouse gas emissions of 25 $MtCO_2$ by 2030.

1 See the IPCC 6th Assessment Report (August 2021) - https://www.ipcc.ch/report/ar6/wg1/
2 See the EDF Group report on the just transition
3 Now enshrined in EDF's Articles of Association, the Group's raison d'être is at the heart of its business model and CAP 2030 strategy: "To build a net zero energy future with electricity and innovative solutions and services, to help save the planet and drive wellbeing and economic development"
4 Taskforce on Climate related Financial Disclosure
5 https://power-producers-ranking.enerdata.net/
6 Scopes 1 and 2 emissions, also including emissions from non-consolidated assets and emissions associated with electricity purchased for sale to end-customers (2017 base)
7 Combustion emissions from gas sold to final customers (Base 2019)

Managing various levers to decarbonise power generation

Over the past 20 years, the Group has implemented and supported the **closure of 48 coal and heavy**[8] **fuel oil units,** which has reduced the annual greenhouse gas emissions of the European electricity sector by more than 40 $MtCO_2e$[9]. In 2019, the EDF Group committed to stop generating coal-based electricity by 2030, across all geographies.

The Group is committed to the **greening of its heating networks** and has defined a set of criteria in favour of **decarbonised thermal energy** to align its gas activities with its climate commitments. In the **island territories**, the EDF Group is, for example, gradually replacing fuel oil with liquid biomass in existing thermal power plants. The Group uses alternative technologies to **SF_6** as soon as possible and is working to reduce the climate impact of **HFCs**.

Measuring the reduction of GHG emissions

Since 2011, the EDF Group has published its **complete greenhouse gas emissions assessment** each year, showing that the Group's direct and indirect emissions are falling at a steady pace. The Group's initial target of direct emissions of between 28 and 30 $MtCO_2e$ by 2023 has been achieved two years ahead of schedule. The Group has already begun to review its emissions trajectory to 2030.

EDF Group greenhouse gas emissions assessment *($MtCO_2e$)*	**2019**	**2020**	**2021**
Scope 1 emissions (target 25 in 2030, and from 28 to 30 in 2023)	33	28	27
Scope 2 emissions	0,3	0,3	0,3
Scope 3 emissions	119	107	102

The **carbon intensity** of the electricity and heat produced by the EDF Group continues to fall in 2021, reaching its lowest value ever, i.e. 48 gCO_2/kWh compared with the European[10] average of 231g/kWh.

EDF Group carbon intensity (gCO_2/kWh)	**2019**	**2020**	**2021**	**Objective 2030**
Specific CO_2 emissions from electricity and heat production / kWh	55	51	48	35

ADAPTING THE GROUP'S FACILITIES TO CLIMATE CHANGE

Prioritising climate risk

With facilities whose technical life span potentially exceeds 40 years, the EDF Group must adapt its installations to the physical consequences of climate change. Following the first IPCC report in 1990, the EDF Group set up a climate services department, unique among the major electricity companies, to support the Group's entities in taking into account the impact of climate change. In 2004, the EDF Group adopted a "Climate Hazards" plan, followed by a climate change adaptation strategy in 2010. Since 2018, climate risk has been a **priority risk for** the EDF Group. The scoring is supported by the conclusions of the report on the impacts, adaptation and vulnerability to climate change published by the IPCC in February 2022.

8 The closures are all accompanied by measures to redeploy employees within the Group and actions to develop new local economic activities

9 Emissions estimated considering an average load factor of 50% for coal plants and 10% for heavy fuel oil plants.

10 Source EEA for EU27 in 2020 https://www.eea.europa.eu/ims/greenhouse-gas-emission-intensity-of-1.

Defining the adaptation policy for facilities

The EDF Group's climate transition plan includes an adaptation component, under the terms of which the Group undertakes, in particular, to assess the **impacts** of climate change and it's evolution assumptions, to adapt **existing facilities,** to make them less sensitive to climatic conditions and resilient to extreme situations, and to integrate them into design of **new facilities**.

Extreme events and summer season

During the summer of 2003, some plants had to reduce their production to avoid contributing to the warming of river water, resulting in a loss of production equivalent to 1% of EDF's output. The "**Grands Chauds"** ('Heatwaves') plan subsequently led EDF to improve the cooling efficiency of some of its power plants and to reinforce the electronics of the reactor buildings in order to withstand temperatures above 50°C. The EDF Group's power plants currently under construction have all been designed to take into account the most recent climate scenarios.

Adapting the facilities of all the Group's major businesses

The Group has launched the ADAPT program to analyse the level of adaptation of the **existing nuclear fleet** to climate change. A detailed study is being carried out at Chooz to produce a full-scale analysis of all potential vulnerabilities to the consequences of climate change, and then to propose an action plan. In order to strengthen the resilience of **hydraulic structures** to extreme climatic events and the risks associated with massive influxes of water into reservoirs, the Group regularly reassesses the flows of extreme floods - in order to ensure that the capacity of the structures to evacuate these floods is maintained - and has developed and installed an innovative technology called *"Piano Key Weir"* [11]on 9 of its structures, which allows a larger quantity of water to be discharged without increasing the size of the dams. To reduce the vulnerability of the **distribution networks**, Enedis is working on burying the high-voltage overhead lines and has created a Rapid Intervention Force (FIRE) which makes it possible to reposition resources and men throughout the country in order to restore the power supply as soon as possible. The FIRE is a key mechanism of the EDF Group with regard to extreme climate risks.

Strengthening action through new adaptation plans

In addition to these long-standing actions by the Group, new climate change adaptation plans are now being deployed in order to **strengthen the actions carried out** as close as possible to the **Group's entities exposed to the physical risks of climate change**.

DEVELOPING THE USE OF CARBON-FREE ELECTRICITY

With a largely decarbonised electricity, the development of electricity uses, which is likely to increase, is a major lever for supporting customers towards carbon neutrality and contributes to the adaptation of the economy to the consequences of climate change.

Supporting customers' decarbonisation with a wide range of innovative and low-carbon solutions

The Group's ambition is to support customers and territories in decarbonising their activities. To this end, the Group is developing a wide range of offers adapted to different markets. Efficient, accessible

[11] These spillways in the shape of piano keys ("Piano Key Weir") are constituted of supply and discharge tanks. Their crenellated shape offers a larger surface for the flow of water, while occupying a reduced space, which is an advantage for the dams collected in narrow places.

and innovative solutions enable each customer (individuals, companies, regions) to become more involved in the energy transition.

The EDF Group offers services and solutions to its **individual and collective housing** customers, such as insulation, heat pumps, thermodynamic or solar water heaters, self-consumption solutions or consumption control. The Group is already the leader in solar self-consumption for **individuals** and offers **business customers** new supply models enabling them to buy local green electricity directly from a renewable energy producer.

The Group supports **companies** and **regions** in optimising their energy flows, reducing their environmental footprint and improving their economic performance. Key areas of focus include switching from fossil-based heat to low-carbon heat (biomass boilers, waste heat recovery) and mature electrical solutions, and deploying high and very high temperature industrial heat pumps for **industrial customers.**

In the **transport** sector, and following the ambitions set out in its *Electric Mobility Plan* initiated in 2018, the Group is now one of the leading operators of electric charging networks.

Set targets in terms of avoided emissions

Supporting customers in decarbonisation contributes to climate change mitigation through avoided emissions. To date, the Group's target is 15 $MtCOe_2$ of avoided emissions by 2030[12]. The results are published in Extra-Financial Performance Statement and the methodology for calculating these emissions has been verified by the Independent Third Party Body.

At the same time, commit to setting the conditions for the optimal development of electricity uses

Because electrifying the sectors that emit the most CO_2 implies having the right conditions for such development, the EDF Group is committed to transforming the electricity distribution network in depth towards ever greater robustness, intelligence and flexibility.

STRENGTHENED CLIMATE GOVERNANCE

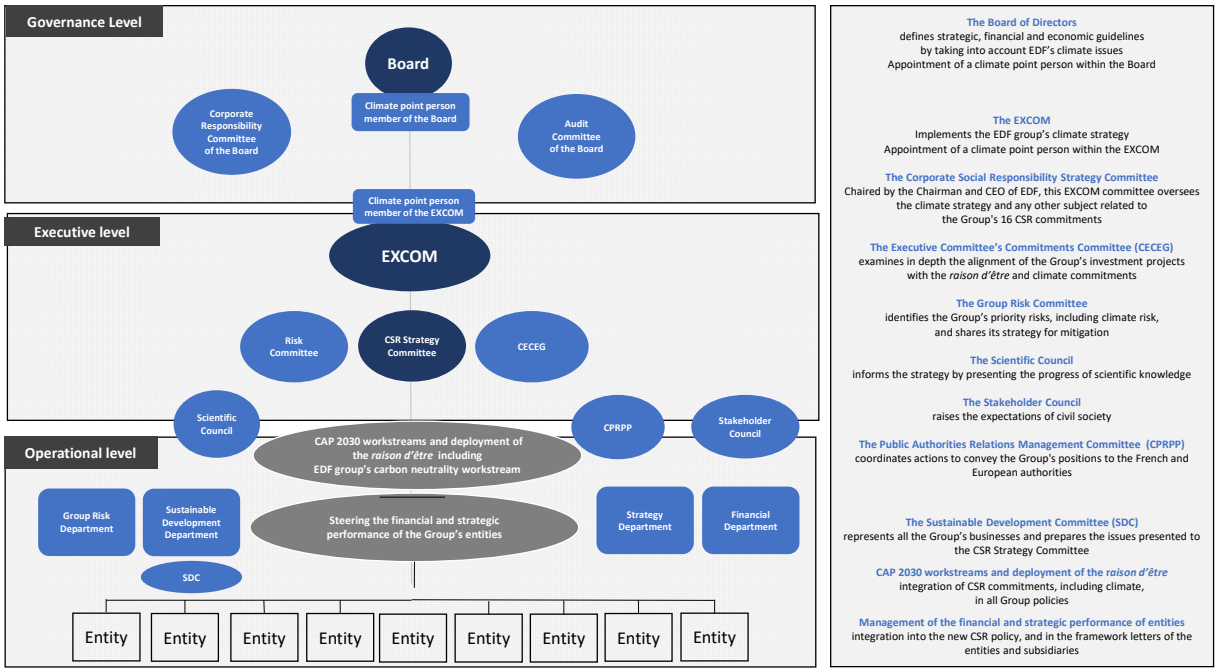
Building on the TCFD recommendations

The EDF Group was one of the first companies to adopt the TCFD recommendations, which specify expected items of climate reporting in terms of governance, strategy, risk management and indicators.

Strengthening climate governance

EDF's governance aims to raise climate issues to the highest level of the company and to strengthen the involvement and commitment of the Board of Directors on all climate-related issues, in line with EDF's raison d'être.

12 Thanks to some of the products/services sold by EDF SA and Dalkia.



The Board regularly reviews opportunities and risks, in relation to the strategy it defines, and in particular those opportunities and risks related to climate change and their impact on the Group's strategy, activities and assets.

The Corporate Responsibility Committee examines how EDF addresses climate change issues.

The Climate point person member of the Board, who is also the Chair of the Corporate Responsibility Committee, is responsible for ensuring, in conjunction with the Chairman and Chief Executive Officer and the Climate point person member of the Executive Committee, that the Board identifies all the impacts of climate change for the Group and that the work of the Board and the strategy it defines integrate climate change issues. An annual work program on climate change issues is thus defined with the Climate point person before the beginning of each financial year for the Board and the Corporate Responsibility Committee.

In 2021, the Board examined the EDF Group's climate strategy and carbon trajectory, the Group's adaptation to climate change in relation to the main physical climate risks, the mobilisation of the Group's stakeholders on climate and the issue of sustainable finance. The Board also discussed energy and climate policies in Europe.

A climate workshop was organised, during which the directors participated in a *Climate Fresk* session. Directors also discussed with two climate negotiation experts the outcome of COP 26 in Glasgow and the progress that could be made to focus the multilateral process and countries' commitments towards a warming limit of 1.5°C by mid-century.

Include a climate criterion in the variable remuneration of managers

The variable remuneration of executives is notably based on CSR criteria, including a climate[13] criterion. The climate criterion used since 2020 is the carbon intensity of the Group's electricity and heat production, which accounts for 30% of the Group-level component. For 2021, the target of 51 gCO_2/kWh is exceeded (48 gCO_2/kWh).

13 The climate criterion used in 2021 is the carbon intensity of the Group's electricity and heat production, up to 30% of the Group's share.

Promote public policies that encourage the real decarbonisation of the economy

The EDF Group promotes public policies that encourage the real decarbonisation of the economy and has set up a specific governance structure to ensure the coherence of the positions defended[14]. The Group is particularly active on the European scene and fully supports the **European Green Deal**. It acts in its own name or *through* Eurelectric, an association representing European electricians, which its Chairman and CEO, Jean-Bernard Lévy, has chaired since May 2021. The Group's commitment is recognised by all stakeholders, including NGOs[15]. For the EDF Group, the strengthening of policies aimed at contributing to carbon neutrality or the increase in the price of CO_2 on the European market represent powerful opportunities to leverage its assets. It uses an **internal carbon**[16] **price** to guide its investments.

Investing in technological and financial innovation

99% of EDF **R&D**'s expenses in France are dedicated to decarbonisation and the transition of energy systems. To support its development in renewable energies, the Group has issued six **Green Bonds** since 2013 for the equivalent of approximately €8.75 billion and has put in place more than €9 billion in **credit lines indexed to** the Group's **ESG indicators.**

Mobilising employees

The EDF Group promotes collective intelligence and implements training programs to enable its managers and all its employees to take ownership of its climate commitments. The innovation dynamic, structured around the "**EDF Pulse**"[17] ecosystem, was complemented in 2021 by the "**Eco2"**[18] programme. The "**Carbon Neutrality Passport**" allows people to test their knowledge of climate change, to estimate their carbon footprint and to take action through practical challenges. The EDF Group is also committed to raising awareness of climate issues among all its employees through a collective intelligence game, the "**Climate Fresk**", which is being deployed at a sustained pace, with nearly 22,000 employees having participated in a workshop by end-2021.

14 These include the Steering Committee for Relations with the Public Authorities (CPRPP)

15 InfluenceMap regularly ranks the EDF Group in its A-list, as one of the companies most actively promoting climate issues in European negotiations: influencemap.org

16 In its response to the CDP 2021 questionnaire, EDF indicates, for example, that the range of carbon prices currently used in its scenarios is from €47/t CO2 in 2020 to €150/t CO2 by 2040.

17 EDF Pulse is based on support systems, prizes with a section for external start-ups and a section for internal start-ups, and a community to develop and disseminate best innovation practices within the Group.

18 This is a collective intelligence initiative based on a series of scientific conferences dedicated to the challenges of a carbon neutral economy