

4.2.1 Control of energy and climate impacts

Orange's energy consumption and scopes 1 and 2 CO₂ emissions

	Units	2022					2021 com- parable basis	2021 histo- rical	2020 histo- rical
		France ⁽¹⁾	Rest of Europe	MEA	Other entities	Group	Group	Group	Group
Scope 1									
Fuel oil (all buildings, all uses)	m ³	717	1,855	62,917	14,927	80,416	77,229	67,325	65,930
Gas	m ³	8,951,429	4,063,820	-	78,312	13,093,561	11,796,163	12,200,067	12,927,319
Coal	metric tons	-	-	-	-	-	15	15	13
Fuel o/w gasoline-LPG (liquefied petroleum gas) for company vehicles	liters	16,325,237	7,536,357	4,641,231	1,471,365	29,974,190	25,512,742	25,747,466	24,656,085
o/w diesel for company vehicles	liters	7,424,414	2,781,714	2,564,478	775,304	13,545,910	10,307,906	10,388,417	7,692,908
o/w diesel for company vehicles	liters	8,900,823	4,754,642	2,076,753	696,061	16,428,280	15,204,837	15,359,049	16,963,178
Scope 1 Energy consumption	GWh	259	121	209	181	✓✓ 770	707	687	1,139
CO ₂ emissions from scope 1 (energy only)	metric tons CO ₂	60,454	32,130	181,459	44,139	318,182	298,989	304,786	275,009
o/w CO ₂ emissions from fuel oil, gas and coal	metric tons CO ₂	19,123	12,811	169,876	40,454	242,263	233,292	239,762	211,771
o/w CO ₂ emissions from fuel	metric tons CO ₂	41,331	19,319	11,582	3,686	75,918	65,697	65,024	63,238
CO ₂ equivalent from other greenhouse gases (refrigerants)	metric tons CO ₂ eq	-	17,472	-	-	17,472	19,237	19,237	7,517
CO₂ emissions from scope 1	metric tons CO₂eq	60,454	49,602	181,459	44,139	✓✓ 335,654	321,886	324,023	282,526
Scope 2									
Scope 2 Energy consumption	GWh	2,311	1,172	1,049	292	4,825	4,653	4,467	4,329
o/w electricity	GWh	2,280	1,166	1,049	292	✓✓ 4,787	4,637	4,467	4,329
o/w electricity from renewable sources	GWh	67	519	118	224	✓✓ 928	802	743	624
o/w certificates (Guarantee of Origin)	GWh	-	296	-	166	462	361	303	488
o/w ESCO, solar farm, site solarization agreements	GWh	-	1	118	0	120	161	161	136
o/w PPA	GWh	67	221	-	58	346	280	280	
CO₂ emissions from scope 2 (market based)	metric tons CO₂	115,942	330,293	448,775	14,167	✓✓ 909,177	1,007,095	978,642	990,554
CO₂ emissions from scope 2 (location based)	metric tons CO₂	119,366	464,392	499,125	48,047	1,130,929	1,087,798		
Scopes 1 and 2									
Energy consumption – scopes 1 and 2	GWh	2,570	1,293	1,258	472	5,594	5,360	5,154	5,468
CO₂eq emissions from scopes 1 and 2 (market based)	metric tons CO₂eq	176,396	379,895	630,234	58,307	✓✓ 1,244,830	1,328,980	1 302 665	1,273,080
CO₂eq emissions from scopes 1 and 2 (location based)	metric tons CO₂eq	179,819	513,493	680,584	92,187	✓✓ 1,466,083	1,409,684		

The coverage rate for the reporting on scopes 1 and 2 is 97.9% of Orange's 2022 consolidated revenues. It applies only to 2022, as it was not calculated for prior years. For fuel, the coverage rate is 89.7%.

Since the figures are rounded, the Group figures may not be the sum of the figures for the different entities.

The figures of certain countries in the MEA region are based on estimates and may be revised.

The 2021 comparable basis includes the integration of the fixed telephony subsidiary in Romania and a change in the Scope 1 emission factors (see the note on methodology relating to the Environment).

(1) The France scope covers Orange France, the Group's headquarters, and the Orange Business Services entities operating in the country.

✓✓ Item reviewed by KPMG: **reasonable assurance**.

The Group's scopes 1 and 2 CO₂ equivalent emissions (market based) totaled 1,244,830 metric tons in 2022 and decreased 6.3% on a comparable basis and 4.4% relative to 2021. This performance was achieved thanks to energy consumption management, the continued use of electricity from renewable sources and a favorable energy mix trend in certain countries. Emissions reported for 2021 stood at 1,302,665 metric tons of CO₂eq. The 2021 comparable basis of 1,328,980 metric tons of CO₂eq takes into account the

change in scope due to the acquisition of the fixed operator in Romania, at +33,582 metric tons of CO₂eq in 2021; the change in the scope 1 scope in France (introduction of district heating and an end to the monitoring of network fuel oil and refrigerant emissions, which are now immaterial), at -246 metric tons of CO₂eq; and the change in emission factors, mainly for gas, due to a new GHG Protocol publication, at -7,021 metric tons of CO₂eq

There are three factors behind the -84,150 metric ton change in CO₂eq between 2022 and 2021 on a comparable basis: the increase in energy consumption and the change in the breakdown between different types of energy, at +53,498 metric tons; the improvement in countries' scope 2 emission factors, at -117,670 metric tons; as well as growth in electricity from renewable sources due to Orange's energy policy, at -19,978 metric tons.

The Group's scopes 1 and 2 CO₂eq emissions (location based) reached 1,466,083 metric tons in 2022, i.e. a 4.0% increase versus 2021 on a comparable basis.

In 2022, the Group's scopes 1 and 2 energy consumption was 5,594 GWh (+4.4% versus 2021 on a comparable basis). This consumption includes 4,787 GWh of electricity, including 928 GWh of electricity from renewable sources, thanks to the implementation of various Orange programs, which corresponds to 19.4% of total electricity consumption. This percentage increased by 2.0 points versus 2021 on a comparable basis, i.e. an acceleration compared with 2021 (+1.6% in 2021 versus 2020 on a comparable basis). See Section 1.3 *Significant events* for the change in the cost of the corresponding energy consumption and the Group's actions to secure its energy supply.

Growing digitization by companies, a trend that has accelerated since the global health crisis, once again had significant effects on traffic this year. The sharp increase in traffic on the networks did not, however, have a direct impact on energy consumption: the rise was only 3% between 2022 and 2021 on a comparable basis for energy in the network and IS. There was also an increase in energy consumption related to buildings (+16% between 2022 and 2021 on a comparable basis) and vehicle use (+6% between 2022 and 2021 on a comparable basis), after an exceptional 2020 and 2021 due to the pandemic-induced lockdowns. The changes compared to 2019 in building- and vehicle-related energy consumption do, however, show sharp decreases, pointing to the effectiveness of the programs implemented (energy consumption reduction of 16% in buildings and of 18% in vehicles between 2019 and 2022 at Group level).

For the major energy-consuming and CO₂-equivalent-emitting countries:

- in France (46% of the Group's energy consumption and 14% of its scopes 1 and 2 CO₂ equivalent emissions in 2022), the slight 1% increase in energy consumption in 2022 versus 2021 on a comparable basis was mainly due to the increase in energy consumption in the networks and information system, which was kept under control at 0.8% thanks to efficiency improvement actions and despite the increase in the number of mobile sites with coverage of dead zones, the continued roll-out of 4G and the gradual ramp-up of 5G. Building-related energy consumption rose by 5.6% mainly due to district heating; this was partially offset by the 2.2% decline in vehicle consumption. CO₂ emissions decreased by 2.7% on a comparable basis, mainly thanks to energy consumption management and the positive energy mix trend in France in 2022;
- in Poland (10% of energy consumption and 24% of scopes 1 and 2 CO₂eq emissions in 2022), the 3.1% decline in energy consumption in 2022 versus 2021 represents an acceleration. This was due, in part, to the 1.9% decline in energy consumption in the networks and information system between 2022 and 2021, thanks to the continuation of both the legacy network decommissioning plan (copper telephone network, ATM technology, etc.) and the energy efficiency action plans, including the implementation of Big Data solutions to control and manage electricity consumption, the use of standby mode in mobile-access networks during the night and the upgrading

of the technical environment with the installation of free cooling. The other contributing factor was the decline in building-related energy consumption. CO₂ emissions fell sharply by 17.1% thanks to energy consumption management linked to the increasing use of renewable energy under Orange's programs, at 80 GWh in 2022 compared with 30 GWh in 2021, and because of the positive energy mix trend in Poland in 2022;

- in Egypt (6% of energy consumption and 12% of scopes 1 and 2 CO₂eq emissions in 2022), energy consumption rose by a sharp 18% in 2022, due mainly to the 16% growth in energy consumption in the network and information system. The 13% decline in CO₂eq emissions can be attributed mainly to the improvement in the energy mix in Egypt;
- in Morocco (4% of energy consumption and 11% of scopes 1 and 2 CO₂eq emissions in 2022), energy consumption rose by 6% in 2022, due in part to the increase in consumption in the network and information system. The 7% increase in CO₂eq emissions can be attributed to both the increase in energy consumption and the deterioration in the energy mix in Morocco, as efforts to use solar to power at the mobile sites did not offset these increases.

Scopes 1 and 2 CO₂ emissions reduction target for 2025 in the digital segment

As part of its Engage 2025 Strategic Plan, Orange has committed to reduce its scopes 1 and 2 CO₂eq emissions in the digital segment by 30% by the plan's end date, compared to 2015. At end-2022, scopes 1 and 2 CO₂eq emissions in the digital segment stood at 1,244,729 for the Group. For this scope, Orange reduced its CO₂eq emissions by 20.8% versus 2015 on a comparable basis. In fact, CO₂ emissions in 2015 before the integration of the Romanian subsidiary, consolidated by the Group for the first time in 2022, were 1,482,132 metric tons of CO₂, versus 1,571,111 metric tons in the basis of calculation in 2022. For this new scope, the Group made 5.4 percentage points of progress toward achieving its target in 2022 (15.4% decline in CO₂ emissions at the end of 2021 compared with 2015 for the new scope).

To meet its 2025 target, Orange continues to pursue the action plans already underway, and will accelerate the decommissioning of old technology equipment in Europe and its program for the use of electricity from renewable sources.

4.2.1.1 Orange's scopes 1 and 2 energy consumption

Network and information system energy consumption

The wide-ranging energy action plan, *Green ITN 2020*, launched in 2008 to reduce energy consumption related to the operation of networks and information systems, is continuing in a second phase with the "Green Program," focused on the commitments for 2025. It relies in particular on new levers, such as the use of artificial intelligence, advanced standby modes, and the ramp-up of active network sharing.

In 2022, the energy consumption of the network and the information system represented 84% of the Group's total consumption and CO₂ equivalent emissions (consumption including that of buildings housing network equipment). The action plans implemented made it possible to limit the increase in the Group's energy consumption (scopes 1 and 2) in the network and information system to 3% in 2022 versus 2021 on a comparable basis, despite new roll-outs and a significant increase in traffic in 2022.



The change in energy consumption is not directly linked to the change in traffic but rather to the physical and spectrum capacity installed in our networks, as well as the number of accesses: in the fixed-line network, energy consumption is proportional to the number of ports (accesses) and is not closely linked to traffic. In addition, the migration to fiber technology is positive from an energy standpoint as FTTH access uses 4.75 times less energy than DSL access. In the mobile networks, energy consumption is heavily dependent on installed capacity and, for a given installed capacity, not closely linked to traffic. Growth in consumption is driven in equal

parts by three factors: the increase in 4G capacity, the improvement in 4G coverage, and the implementation of 5G.

5G is critical to curbing growth in energy consumption: a 5G site is five times more energy efficient than a 4G site, under medium load condition with five spectrum bands.

Orange is also gradually adapting the 2G and 3G networks to their residual uses.

The table below shows the electricity savings for the different categories in the action plans implemented by Orange at the Group level to improve its energy efficiency.

ITN electricity consumption reduced by action plan category – in GWh	2022	2021
Equipment upgrade <i>(replacement of equipment with new, more energy-efficient equipment)</i>	408	405
Data center program <i>(restructuring of the portfolio, virtualization, natural ventilation, optimization of mechanical rooms, etc.)</i>	249	234
Decommissioning of old technologies	165	143
Mobile access network sharing	90	91
Optimization of the technical environment <i>(smart metering, temperature management, restructuring of the equipment stock, etc.)</i>	115	84
Total	1027	957

Thanks to the *Green ITN* program, between 2015 and 2022, more than 5.1 TWh of electricity and more than 417 million liters of fuel oil were saved across the Group's networks and information systems scope. These savings prevented the release of at least 3,4 million metric tons of CO₂ over this period. During 2022, the actions taken avoided the consumption of 1 027 GWh of electricity and 80 million liters of fuel oil.

These results were made possible by a series of measures introduced and increased cooperation with equipment suppliers with a view to developing and obtaining highly energy-efficient telecommunication equipment.

Sharing the network and the technical environment of the mobile-access network, which generates the majority of the energy expenses of the Group's network, is a powerful lever for reducing energy expenses. At the end of 2022, 57% of the radio sites used passive sharing (for both infrastructure and energy), of which 29% used active sharing (expanded to radio access). Based on studies carried out in Poland when active network sharing within the Networks! Joint venture was set up, energy savings of around 30% were recorded.

Similarly, the increase in new generations of radio technology in the routing of traffic greatly improves energy efficiency. Each generation that arrives at maturity allows the energy consumption of 1 gigabyte transferred to be reduced to approximately one-tenth of the initial consumption. With its targeted activation modes, 5G is efficient from an energy standpoint.

The rationalization and virtualization of Data centers is continuing, with capacity rationalization and the optimization of the portfolio, their occupancy rate and their energy efficiency. In France, following the example of the first eco-efficient data center commissioned in 2012, Orange has undertaken large-scale work to build two new Data centers, which replace nearly ten Data centers across the country. At equivalent capacity, an eco-efficient data center consumes 30% less than the old ones. Thus, the PUE (power usage efficiency) of a newly installed data center in France is less than 1.3. The average PUE of Data centers installed in France was 1.62 in 2022, compared with 1.64 in 2021, 1.65 in 2020 and 1.68 in 2019. In other European countries, Orange has also begun construction on new eco-efficient Data centers based on the same model, bringing the average PUE in the region's countries to 1.61. In Africa & Middle East, Orange is building new Data centers and continues to upgrade the existing facilities.

Average PUE	2022
France (including technical sites)	1.620
Other European countries	1.615
Africa & Middle East	1.767

Network decommissioning is a future source of energy savings: the oldest equipment (mainly in the fixed network) is gradually replaced, although the pace of dismantling fixed networks is dependent on the sector's regulatory framework. In France, the decommissioning of copper will begin in 2023. For the mobile networks, the Group plans to gradually phase out the 2G and 3G generations in all European Union countries between 2025 and 2030.

The expansion of metering solutions continues on radio sites in particular; the trials conducted in 2021 on data analysis using artificial intelligence help to optimize energy consumption.

In 2022, innovation efforts were also made on assessing the impact of changes in architecture and traffic on energy consumption: this involved in particular the roll-out of 10G/100G interfaces for optical access (XGS-PON (10 Gigabit Symmetrical PON) technology), and 400G on the IP core side, IP/optical synergy, etc. These new architectures reduce energy consumption up to 2.5 times for the same quantity of traffic. Similarly, studies were launched on the implementation of specific functionalities, such as placing cards on standby and the phasing out of chassis/cards/ports on fixed equipment.

Since November 2021, Orange has had a next-generation laboratory dedicated to testing solutions to reduce the Orange group's energy footprint. This is a co-innovation initiative with various industrial and academic players.

This laboratory is focused on different technologies to provide an optimized technical environment that meets the specific needs of each region or country. In particular, 2022 was the year that equipment cooling was tested (especially for servers) using the free cooling technique, with never-before-seen efficiency (PUE < 1.1), and 400VDC power solutions, coupled with a photovoltaic device allowing for about 20% self-consumption. Automatic power can now be measured via open APIs, yielding a PUE of less than 1.2.

Other energy consumption

Reducing buildings emissions

In 2022, office buildings represented 11% of the Group's energy consumption and 10% of CO₂ emissions. Building-related energy consumption and CO₂ emissions were up 16% and 8%, respectively, versus 2021 on a comparable basis. These trends are difficult to interpret due to the pandemic, which caused some buildings to close in 2021.

Various actions were taken to improve the energy performance of buildings in France and to reduce CO₂ emissions:

- the real estate carbon strategy was maintained and “tertiary decree” trajectories were defined for the eligible portfolio (734 sites), with a requirement that energy consumption be reduced by 40% by 2030 and a 15.8-million-euro multi-year plan to exit fossil fuels with the gradual phasing out of fuel oil furnaces, a reduction in gas furnaces, and the development of renewable energy (heat pumps, recovery of heat from the network's technical environments, photovoltaic panels, etc.). The changes compared to 2019 in building- and vehicle-related consumption do, however, point to the effectiveness of the programmes implemented;
- definition and monitoring of the energy saving plan for offices, with a more than 12% reduction (adjusted for the harsh winter) in building consumption in the fourth quarter of 2022;
- a lowering of our environmental impacts with the integration of the latest campuses delivered with HQE certification for buildings in operation at the Excellent level (254,000 m², i.e. 12% of Orange's office portfolio).

In 2022, Orange was awarded 20 Cubes⁽¹⁾ trophies, including seven Golden Cubes in France and internationally with the Maurice Ebène site (Mauritius) and the Orange Rabat site (Morocco) winning in the new “efficient buildings – absolute value” category as part of the implementation of the Tertiary Eco-Efficiency Plan (*Dispositif d'Économie d'Énergie Tertiaire* – DEET). A total of 8.1 GWh in energy savings were achieved through 30 listed buildings, which corresponds to a 995-metric-ton reduction in CO₂ emissions.

Reducing transport emissions

The use of commercial vehicles represents 5% of the Group's energy consumption and 6% of its CO₂ emissions, increasing by 6% and 7%, respectively, compared with 2021 due to the full resumption of activity after the pandemic crisis (business travel increased by approximately 140% between 2021 and 2022). Orange continues to roll out its action plans aimed at increasing the share of electrified vehicles in its fleet, limiting business travel and promoting collective and shared transport methods.

The Group has a large fleet of company vehicles, with France representing three-fourths of the Group's fleet.

The size of the fleet in France has been declining at a steady pace of about 4% per year on average since 2015, to stand at 15,200 vehicles at the end of 2022. The aim is to reduce the fleet further, by more than 1,000 vehicles, by 2025. When renewing its fleet, Orange in France is now making it mandatory to avoid diesel technology, which emits fine particles (NO_x), and is boosting the roll-out of electrified vehicles to control its CO₂ emissions.

In France, Orange was using more than 3,000 electrified vehicles at the end of 2022, a 37% increase in one year. Since the start of the fleet electrification program, more than 1,364 charging points have been installed. These points have been networked at 250 Orange sites, now allowing the stations concerned to be supervised and monitored. Each user of Orange's rechargeable electrified vehicles has a web tool and a mobile app, including a map of these charging stations and the ability to book them. Finally, these vehicles are equipped with cards that give them access to a network of 75,000 charging points across France. The Group aims to be equipped with 7,000 electrified vehicles by 2025.

Launched in 2013 with around 100 vehicles, the car-sharing fleet reached 3,400 dedicated vehicles at the end of 2022. It targets a large group of employees and is one of the vectors of fleet electrification. Orange thus has the largest car-sharing fleet in France and Europe, and wishes to continue optimizing this fleet with 6,000 shared vehicles by 2025.

Furthermore, several Group entities have introduced plans to limit the use of private cars (company travel plans, carpooling, car-sharing, road risk management and eco-driving training courses, etc.). For example, in France, Orange SA's carpooling solution was offered to 27,250 employees, and about 4,500 had signed up as at December 31, 2022.

Employees also have solutions allowing them to reduce business travel (video-conferencing and other tools for remote collaborative work). Orange has around 300 video-conferencing rooms in France and close to an additional 100 in the rest of the world. This figure is likely to fall given the new collaborative solutions rolled out within the Group.

4.2.1.2 Use of electricity from renewable sources

To meet the scopes 1 and 2 CO₂ emissions reduction target, a growing share of electricity needs will have to be covered by power from renewable sources by the plan's end date. Orange is prioritizing additional green energy production and is benefiting from the decarbonization of the energy mix in the countries in which it operates. At the end of 2022, Orange's own actions enabled it to cover 19.4% of the Group's electricity consumption with power from renewable sources, versus 17.2% in 2021 on a comparable basis. These come from Guarantee of Origin certificates, PPAs, ESCos, solar farms, and the use of solar power at the sites, totaling 928 GWh in 2022. Adding in the change in electricity mix in the countries in which Orange operates, the Group met 37.8% of its electricity needs with power from renewable sources in 2022, versus 36.3% in 2021 and 37.1% in 2021 on a comparable basis.

(1) CUBE (Contest for better Usage and Building Efficiency) contest held for the tertiary sector by the French institute for building performance (Institut français pour la performance du bâtiment – IFPEB). Every year, several hundred public and private players make a commitment to reduce their energy consumption.

2022		France	Rest of Europe	MEA	Other entities	Group
Renewable electricity rate from Orange	%	2.9%	52.8%	11.2%	23.3%	19.4%
Renewable electricity rate from country mix	%	21.8%	11.6%	19.7%	19.4%	18.4%
Total renewable electricity rate in total electricity consumption	%	24.7%	64.4%	30.9%	42.7%	✓✓ 37.8%

The coverage rate for the reporting on the percentage of electricity from renewable sources is 97.9% of Orange's 2022 consolidated revenues.

✓✓ Item reviewed by KPMG: **reasonable assurance**.

In Europe, Orange prioritizes the use of long-term renewable electricity contracts at a known price (Power Purchase Agreement – PPA). At the end of 2022, the Group had thus entered into agreements of this type for a total capacity of almost 900 GWh per year by 2025, i.e. 26% of estimated electricity consumption for 2025 in Europe.

In addition, certain European countries have used energy from renewable sources for their electricity supply by purchasing Guarantee of Origin (GO) certificates from their providers: this was the case in 2022 for Orange Belgium (for 95% of its scope 2 electricity consumption), OBS International (for 23%), Orange Moldova (20%), Orange Romania (46%), Orange Slovakia (76%), and TOTEM (72%).

In the MEA region, Orange has rolled out an extensive solar energy program, with more than 7,200 sites in 14 countries equipped to power the Group's infrastructure with photovoltaic solar panels at the end of 2022 (4,750 sites at end-2020 and 6,000 sites at end-2021), which represents more than 18% of all mobile sites in the MEA region. This program is carried out either through investments by Orange itself, by installing solar panels at the bottom of the technical equipment, or through ESCo outsourcing programs.

Orange is rolling out ESCo solutions in the MEA region. The aim is to outsource investments in, and installation, upgrading and operational management of, electricity generating infrastructures with a view to optimizing electricity consumption, supply reliability, its environmental impact and energy costs. These projects have been rolled out in seven countries in the MEA region: Guinea Conakry, Côte d'Ivoire, Burkina Faso, Sierra Leone, Central African Republic, Liberia and Cameroon. The roll-out of this program should continue in other countries in the region. Orange has undertaken to extend some of these solar fields to benefit neighboring populations, with the first mini-grid operational in the DRC in November 2021.

This program is supplemented by the implementation of hybrid generator/battery sites, significantly reducing the consumption of fuel oil thanks to the optimization of the process.

Orange is also developing an electricity production program using solar plants. In Jordan, nearly 70% of the electricity required for Orange's operations is covered by electricity from three solar plants. This solution will also be rolled out in Mali, with plans to extend it to other countries as soon as the regulatory energy framework allows for self-consumption through energy network transport and distribution (wheeling) to all of Orange's points of consumption.

Orange thus achieves an annual production of 120 GWh from renewable sources in the Africa-Middle East region.

Taking into account the emission factors for CO₂ derived from the energy mix of these MEA-region countries, these programs made it possible to avoid more than 209,000 metric tons of CO₂ emissions in 2022. This reduces fuel consumption by 78 million liters, i.e. up to 80%, depending on the site.

In 2022, the technical site solarization program was extended to the partial solarization of office buildings and Data centers, both in the MEA region and in Europe.

For example, in 2022, Orange implemented an Energy-as-a-Service (EaaS) solution to use solar power at the Groupement Orange Services located in Côte d'Ivoire (GOS – a pooling entity serving 18 subsidiaries of Orange Africa & Middle East (OMEA), providing hosting and operation services for pooled infrastructure, service platforms and IT) through the installation of a photovoltaic plant, on the roof and on solar canopies for parking lots, with total installed power of 355 kWp covering close to 50% of the Data Center's daytime consumption (7:00 am to 6:00 pm). Other Data centers and strategic sites are powered with solar energy, including in Senegal, Guinea Conakry and Cameroon. New contracts of the same type were signed on March 1, 2023 to ensure the supply of renewable energy to our main Data centers in Africa: the solarization of Orange's largest data center in Côte d'Ivoire and the largest in Burkina Faso. Other contracts are under negotiation.

4.2.1.3 Orange estimated scope3 CO₂ emissions

Scope 3 (in thousands metric tons of CO ₂ eq)	2021	2020	2019	2018
	Group	Group	Group	Group
Purchases of goods & services	3,034	3,004	3,277	3,360
Fixed assets	1,884	1,839	1,749	1,350
Energy upstream	357	352	315	351
Upstream transportation and distribution	62	62	66	69
Waste generated in operations	34	30	33	36
Business travel	6	11	38	35
Employee commuting	128	139	143	146
Downstream transportation and distribution	12	14	14	14
Use of sold products	555	528	588	484
Total scope 3 digital segment	✓ 6,072	✓ 5,979	✓ 6,223	✓ 5,844

Table prepared in accordance with the GHG Protocol categories – categories 3.8, 3.10, and 3.12 to 3.15 are not applicable or not significant.

The coverage rate for the reporting on Scope 3 is 94.1% of Orange's 2021 consolidated revenues. It applies only to 2021, as it was not calculated for prior years.

✓ Items reviewed by KPMG: **limited assurance**.