Committed to Europe

Towards a greener and more sustainable society: Orange's views on the Green Deal

The Climate change crisis is affecting us all. There is no planet B and we must all act now to swiftly trigger the transition to a greener economy and society. Hence the European Green Deal initiative is very timely and must remain a strategic priority. We strongly support the EU's willingness to lead the global effort and become the first climate-neutral continent by 2050. Following the Covid19 crisis, the green transition has to be one the pillars of the recovery plan together with the digital transformation in order to rightly reshape the EU economy and society.

We firmly believe that the digitalisation of our society and economy is essential to tackle climate challenge, as innovative services will help reducing environmental impacts in transport, energy, agriculture and many other industrial sectors or day-to-day activities. This enabling role must be accompanied by a reduction in the digital sector's own carbon footprint as well.

We therefore consider it essential for the EU to:
- Ensure it is carbon neutral by 2050 with an intermediary target to reduce Greenhouse Gas emission by 50% by 2030 compared to 2015 levels; relying upon common sectoral methodologies to follow the progress made;
- Increase the production of renewable energy to reach such targets;
- Increase and promote a circular economy, notably regarding mobile devices and network equipment, while taking into account market best practices;
- Promote digital sobriety and energy efficiency usages to EU society;
- Adopt and promote a global strategy for the Green transition, to accompany the EU transition and help maintain its competitiveness worldwide, while strengthening cooperation with other continents, especially with Africa.

Orange supports the Green Deal objective to achieve a net zero carbon EU by 2050

Ensuring that the EU is carbon neutral by 2050 is a prerequisite if we want to ensure a future healthy society and a thriving economy. According to the European Joint Research Centre, the EU could experience a welfare loss of around 2% of GDP per year by 2100 under a high emissions scenario[1]. Global average temperatures are already roughly 1°C warmer than they were one century ago, bringing more extreme and erratic weather patterns.

Regarding the intermediary Greenhouse Gas (GHG) emission reduction objective for 2030, we believe it should be ambitious and proportionate. We consider that an increase of this objective to 50% compared to 2015 levels would meet such criteria, implying at least a 40% share of renewable energy and the introduction of energy efficient industrial processes.

When looking at the digital sector, telecom operators face a major challenge: to offer ever more connectivity and bandwidth to meet users' demand while reducing their carbon footprint. The GSMA has set up an objective for all its members to be carbon neutral by 2050. The ICT industry, through the ITU with the GSMA and GeSI, has released the first ever science-based pathway to

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[1] Source: https://ec.europa.eu/jrc/en/peseta-iii

reduce greenhouse gas emissions across the telecoms sector[2], including a target to reduce its GHG emissions by 45% by 2030[3].

An objective of carbon neutrality by 2030 for the digital sector risks on the other hand being disproportionate and would in our view not send the right signal in terms of a concrete shift to a greener society. It would indeed require large offset measures, which per se do not constitute a real reduction of GHG[4].

> **Orange's strategic plan** 'Engage 2025'
> Orange has set the objective to become net zero carbon by 2040 for the entire Group footprint at global level. A timeframe that is feasible but demanding since we are not planning to rely on offset measures. To tackle the residual part of our CO2 emissions, we will invest in carbon sinks, such as funding the planting of trees or mangroves. To achieve our ambition, we have set the following intermediary objectives
> - Reducing our CO2 emissions by 30% between 2015 and 2025;
> - Using more than 50% renewable electricity by 2025.

Another key aspect in meeting this challenge is to promote digital sobriety through reasonable uses. Measures should be taken to encourage the EU society adopting a moderate usage of digital technologies.

To reach such targets, the telecom sector has to adopt smart measures on emission reduction and develop circular economy processes

Reducing CO2 emissions

The digital sector itself accounts for 3.5%[5] of global CO2 emissions. This is relatively modest compared to other sectors such as transport or construction, but requires substantial actions in order to be decreased. Those include:

- Relying on smarter and greener networks and equipment; Telecom networks are becoming more eco-friendly by design, thanks to groundbreaking innovations. For instance, due to the 'advanced sleep mode', the 5G antenna will go automatically into a standby mode when there is no user nearby, thus reducing its energy consumption drastically. Similarly, the FTTH network is greener than the old copper network[6]. Supporting voluntary network sharing agreements is another important means to improve the environmental footprint and avoid duplication of equipment in telecom networks.
- Renewable energy as a means to curb emissions; Operators will have to rely on a mix of renewable energy. In Europe, this involves Power Purchase Agreements (PPAs) with guarantees of origin with electricity suppliers. However, with the increasing number of economic players seeking PPAs, there is a risk that the European market will no longer be able to deliver these. This issue will need to be addressed.

How the EU can help:

- Define an ambitious but realistic carbon neutrality goal for the digital sector relying as little as possible on offsets, leading to a 2040 target at the earliest, and taking into account the varying national energy mix of the Member States when setting renewable energy targets;
- Encourage all stakeholders to develop a common methodology in order to define reliable and comparable emission reduction targets;

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[2] https://www.gsma.com/gsmaeurope/news/sbti/
[3] https://www.itu.int/en/mediacentre/Pages/PR04-2020-ICT-industry-to-reduce-greenhouse-gas-emissions-by-45-percent-by-2030.aspx
[4] It takes some time to compensate the GHG emissions and we should not introduce a general right to pollute; hence compensation schemes should remain the last resort solution for the remaining emissions that cannot be avoided at all.
[5] Stéphane Richard - Orange CEO interview in *Les Echos*, https://www.lesechos.fr/tech-medias/hightech/orange-va-investir-une-centaine-de-millions-deuros-dans-les-energies-renouvelables-1168218
[6] Arcep, octobre 2009 : *Réseaux du futur, l'empreinte carbone du numérique* : a FTTH line consumes four times less electricity than a traditional PSTN line (0.5 Watt Vs. 2.1 W)

- Increase the availability in the EU of low carbon and renewable energy, notably by supporting R&D efforts on hydrogen and batteries;
- Design a carbon border adjustment mechanism ensuring the right balance between preserving the EU's competitiveness and maintaining reasonable prices for imported products and services;
- Promote digital sobriety across Europe, via information campaigns;
- At global level: Help to influence non-EU manufacturers to reduce their carbon footprint with increased use of renewable energy and intensify the cooperation between the EU and Africa in order to drive change in this region.

Orange's "Green ITN (IT & Network)" programme
Overall, the Orange group emits 1.4 million tons of CO_2 per year worldwide; our networks accounting for 80% of our GHG emissions. Launched in 2010, our "Green ITN" programme aims at "greening" our networks by replacing old components with more energy efficient ones, using 'free cooling' technology in our new data centres, or relying on renewable energy. All these measures have led to concrete results: 5 TWh and 260 million litres of fuel oil saved between 2010 and 2018, corresponding to 2.7 million tons of CO_2 avoided. Our updated "Green ITN2025" aims to prevent the emission of over 80,000 tons of CO_2.

Orange and renewable energy
In 2019, Orange used 26% of renewable electricity to power its infrastructures and services, and by 2025 half of our energy needs will be covered by renewable energy. In MEA, Orange has deployed 2,800 solar sites to power our mobile networks. In Jordan, at the end of 2019, our three solar farms were covering 73% of our electricity needs. So far, we have achieved 100% renewable electricity usage in two countries, namely Spain and Belgium.

Limiting our impact on natural resources by enabling a circular economy

The Circular Economy Action Plan proposed by the EC announces many crosscutting initiatives to decouple economic growth from resource use. From the analysis of scarce resources to the recycling and reuse of equipment, there will have to be a gradual evolution of economic models and processes, which will impact the entire ecosystem, including digital equipment suppliers.

Telecoms operators have been active in this area for many years already, embracing a broad variety of good practices in our day-to-day operations, e.g. around recycling and refurbishing of devices, or reducing waste. We now call on the EU institutions to take into account those best practices when debating the Circular Economy Action Plan in the digital sector.

As an active member of the Ellen MacArthur Foundation[7], Orange has been working for several years to reduce its impact on resources and raw materials. Here are our objectives for 2025:

Eco-design:	Repairs:
- Adopt an Eco-Design approach for 100% of Orange branded devices (e.g. set top boxes, IoT) - Using zero plastic in their packaging	- Offering an attractive service to repair mobile terminals sold by Orange in all the countries where we operate
Reuse:	Collection:
- Ensuring that 10% of the volume of our sales of mobiles are made of reconditioned devices - Allocating 20% of CAPEX to buy refurbished network and IT active equipment - Further developing a marketplace for second-hand network equipment Along with other operators, and with the help of the ITU and the Ellen MacArthur Foundation, Orange now includes refurbished equipment requirements in its procurement processes for suppliers.	- Collecting 90 to 100% of boxes / set-top boxes distributed by Orange - Collecting 30% of mobile terminals in each European countries where we operate - Collecting the equivalent by volume of WEEE of 20% of mobile terminals sold in the MEA region In total, Orange has collected 15 million mobiles in 10 years and has achieved a 87% collection rate for its Livebox router.

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[7] https://www.ellenmacarthurfoundation.org/fr/economie-circulaire/concept

How the EU can help:
- Foster measures to improve, promote and increase the secondary market for equipment;
- Rely on market players' best practices for any new measures, considering the entire value chain to ensure the right level of responsibility is put at the right place;
- On the suppliers/manufacturers' side: incentivise the re-use of equipment and manufacture in the EU as a way to reduce scope 3[8] emissions, and impose transparency requirements for the environmental characteristics of a service/product;
- On the consumers' side, avoid multiplying information display obligations that could confuse consumers, and launch a campaign for citizens to bring back their unused devices.

Telecom networks and digitalisation of the EU society are key enablers for the green transition

Developing and promoting the adoption of digital solutions is a way to enable environmental gains in other sectors. For instance, according to GSMA, in 2018, mobile communications technologies enabled a decrease in 1.44 billion MWh of electricity and gas, and 521 billion litres of fuel, globally[9]. Digital solutions relying on state of the art networks can do more in the future through the Internet of Things and Artificial Intelligence. This is why we strongly believe that in this period of economic recovery and green transition, the EU should support a rapid and wide digitalisation of the EU society and economy.

Digital solutions can enable a green transition for instance in the following sectors:

Agriculture	**e-Health**
Smart sensors are used to improve energy consumption and water savings for farmers. See for instance, the Orange Pig Data Solutions https://hellofuture.orange.com/en/pigs-and-data/	Thanks to enhanced connectivity, telemedicine and remote surgery can be carried out. The Covid19 crisis has led to a surge in the development of e-health services such as remote health monitoring and health data analysis.
Smart cities	
The IoT combined with data analytics can help urban managers integrate environmental risks and energy savings into their urban planning schemes. Together with other UN agencies, the ITU has established the U4SSC (United for Smart Sustainable Cities), a platform open to all experts to exchange and adopt common principles and standards for a global communication system that is respectful of the environment and future generations.	

How the EU can help:
- Support private investment and ease the rollout in the EU of state-of-the-art telecom networks, FTTH & 5G;
- Help set up a cooperation platform gathering all stakeholders, across the industries, to define their needs and issues for which digital assets can play a key role.

For more information: www.orange.com/committedtoeurope, or follow us on Twitter: @Orange_Brussels

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[8] Scope 1 emissions are direct emissions from owned or controlled sources. Scope 2 emissions are indirect emissions from the generation of purchased energy. Scope 3 emissions are all indirect emissions (not included in scope 2) that occur in the value chain.
[9] https://www.gsma.com/betterfuture/wp-content/uploads/2019/12/GSMA_Enablement_Effect.pdf