



WORLD'S LEADING MOBILE OPERATORS TO DISCLOSE CLIMATE IMPACTS AS PART OF NEW GSMA-LED CLIMATE ACTION ROADMAP

Frequently Asked Questions:

What is CDP?

Formerly known as the Carbon Disclosure Project, CDP runs the global disclosure system that enables companies, cities, states and regions to measure and manage their environmental impacts. As part of its climate change programme, CDP requests information on climate risks and low carbon opportunities from the world's largest companies on behalf of over 525 institutional investor signatories with a combined US\$96 trillion in assets.

What information will mobile operators be disclosing and when will we know the results?

The mobile operators that participated in CDP in 2019 answered the [2019 Climate Change questionnaire](#) that requests information on the climate change related impacts on the business in the main areas of governance, strategy, emissions management and risks/opportunities.

The questionnaire goes into detail around many areas including Scope 1, 2 and 3 emissions, emissions intensity, renewable energy, governance and incentives for management of climate-related issues, how climate-related issues are incorporated into business strategy, the use of carbon pricing and scenario analysis, emission reduction targets, projects, initiatives and investment in low carbon solutions. The completed responses are independently scored, and the results published later this year.

What is the SBTi?

The Science Based Targets initiative (SBTi) is a collaboration between CDP, UN Global Compact (UNGC), the World Resources Institute (WRI) and WWF. Its goal is to enable leading companies to set ambitious and meaningful corporate GHG reduction targets.

Targets adopted by companies to reduce GHG emissions are considered 'science-based' if they are in line with what the latest climate science says is necessary to meet the goals of the Paris Agreement – the latest science demonstrating that targets should aim to limit global warming to below 1.5°C above pre-industrial levels.

Why is there a need for a specific mobile industry science-based target?

A mobile specific sector pathway allocates a carbon budget to the mobile sector, creating a decarbonisation pathway that is in line with science. The method considers the uniqueness of the mobile sector, such as its potential to mitigate its carbon emissions and its projected growth. This pathway, developed in collaboration with the ITU and GESi, will be consistent with the climate models used by SBTi and will allow mobile operators to set their own targets safe in the knowledge that these are in line with science and a global warming trajectory of 1.5°C.

What contribution does the mobile sector make to GHG emissions today?

The latest estimate of the energy footprint of mobile networks is about 130 TWh per year, with a GHG footprint of about 110 MtCO₂e per year – this is equivalent to approximately 0.6% of the

global electricity consumption and 0.2% of global GHG emissions. This is for the network emissions only; including the emissions of mobile phones (including their manufacture and use) brings the total annual footprint to about 200 MtCO₂e, or about 0.4% of global GHG emissions (Source: [Ericsson](#)).

At a company level, GHG emissions are classified under three categories, or 'scopes':

- **Scope 1:** All direct sources of emissions owned or controlled by the operator, predominantly arising from fuel consumption to power fleet, heat buildings and power back-up generators.
- **Scope 2:** Indirect emission sources, predominantly power consumption through electricity purchased to power networks and data centres.
- **Scope 3:** Emissions from corporate business travel; emissions from suppliers providing goods and services and emissions associated with the use of products and services by customers.

What are mobile operators doing to reduce their GHG emissions?

Mobile operators are striving to minimise their own climate impact by improving energy efficiency, sourcing renewable energy, and working with stakeholders to decrease value chain emissions.

For many mobile operators, the largest emissions within their own operations (scope 1 & 2) stem from the deployment and running of networks. This is where the bulk of the energy consumption and therefore GHG emissions lie. For many operators, this is approximately 90% of the energy consumption of their operations.

Telefonica has stated that implemented 139 energy efficiency initiatives across its networks and offices in 2018, resulting savings of 181 GWh and preventing over 73,145 tonnes of CO₂ eq emissions (source: [Telefonica](#)). Notable case studies of energy efficiency innovation by operators can be found at: <https://www.gsma.com/futurenetworks/case-studies/>

Operators are also setting goals to expand the share of renewables in their energy mix over the coming years as they focus on initiatives that reduce energy consumption and GHG emissions, and contribute to international environmental protection goals. Several large operators are targeting 100% renewable electricity in the near future.

Estimates from the GSMA based on operators that disclose scope 1, 2 and 3 emissions, suggest that about 70% of operators' total GHG emissions are categorised as scope 3. Approximately two thirds of these on the supply side and a third being downstream emissions. Mobile operators therefore have the potential to positively influence emissions levels across the value chain.

Why are some mobile operators moving faster than others on emissions reductions?

This are several factors determining the rate at which operators will achieve emissions targets, the main one being the availability of renewable energy from local power generation and distribution. Other factors include the extent and availability of grid electricity – off-grid or poor-quality grid means cell sites are often reliant on diesel generators, which result in higher emissions.

How will mobile technology enable the transition towards a zero-carbon economy?

The mobile industry is not the largest contributor of carbon emissions, but as we increasingly

enter a digitised world, it can be part of the solution. This is through providing the connectivity for digital solutions that reduce energy use, reduce travel and transport, or otherwise reduce GHG emissions.

Examples include connectivity for buildings to support energy management and for vehicle telematics (reducing fuel consumption and optimising routing). This is in addition to more traditional areas of remote and mobile working, reducing emissions from travel and commuting. Emerging areas with significant potential for future emissions reductions include agriculture, health, the sharing economy and smart cities.

What will the introduction of 5G mean in terms of climate impact?

Although 5G networks are likely to drive a dramatic increase in mobile traffic, they are also designed to be more energy efficient than their predecessors. Crucially, 5G and related technologies give mobile operators precise control over their networks' performance and, by extension, energy consumption.

Mobile operators will increasingly be able to use network function virtualisation, software defined networks and network slicing to tailor the connectivity to the needs of the application. That will mean less energy is wasted. Although 5G is likely to drive a massive expansion in the number of 'things' connected, many of these connections will consume very little energy. For example, some NBIoT connected devices will be able to function for a decade using a single battery.

At the same time, 5G networks will be much denser than their predecessors, employing more base stations and other infrastructure. Moreover, many mobile operators will run 2G, 3G, 4G and 5G networks in tandem for much of the next decade, placing upward pressure on their energy usage, before they are able to realise savings by decommissioning legacy networks.