FORMULA 1®

SUSTAINABILITY UPDATE

2025

INTRODUCTION

Formula 1 is on track to achieve its target of becoming Net Zero by 2030, having delivered a 26% reduction (including SAFc) in its carbon emissions by the end of 2024 compared to its 2018 baseline.

By working across our business, and in collaboration with the Formula 1 teams, promoters, partners, and the FIA, we are applying the efficiency and innovation that define the sport to the challenge of reducing our carbon footprint and delivering against our target.

Whether it is investing in the latest fuel technology for our cars, trucks and planes, transitioning our events to green energy, rationalising our race calendar, or implementing ultra-efficient logistics processes, every part of the sport has undergone meaningful change since 2018 in pursuit of this challenge.

Formula 1 has tackled this challenge in the same way the teams and drivers approach every Grand Prix - with a relentless focus on efficiency and by harnessing the latest technology to deliver results. While we are proud of what we have achieved so far, we cannot rest on our successes. In the years ahead, our commitment to reaching Net Zero by 2030 will only intensify, with cross-sport investment in sustainable aviation fuel, a shift from air to sea freight, and, from 2026, the introduction of advanced sustainable fuel in Formula 1 cars.

This progress has been achieved during a period of significant growth for the sport, with the calendar expanding from 21 races in 2018 to 24 races over the past two seasons, race attendances increasing from 4 million to 6.5 million, and Formula 1's global fanbase growing to more than 826 million. The data shows that if no changes had been made to operations during this time, there would have been an estimated 10% increase in the sport's carbon footprint vs 2018.

Our Net Zero by 2030 commitment sets our a minimum 50% emissions reduction target, with any remaining unavoidable emissions offset using credible programmes in line with latest best practice guidance. We are proud to report that, at the end of the 2024 season, we are more than halfway to achieving this, reporting a 26% reduction (including SAFc) in our absolute carbon emissions compared to 2018, with the footprint for the sport now standing at 168,720 tCO2e, down from 228,793 tCO_2e in 2018.

This update incorporates a re-baselining of our 2018 carbon footprint, reflecting supplier data improvements, and in alignment with industry best practices and internationally recognised standards. As a result, the reported 2018 footprint has been revised to 228,793 tCO_2e, down from 256,551 tCO_2e. This ensures that the reported emissions reductions reflect genuine progress compared to the baseline year, rather than improvements resulting solely from changes in accounting methods.

Key initiatives underpinning this momentum include:

Emissions from Factories and Facilities for the sport have **reduced by over 34,000 tCO_2e** compared to 2018, representing a 59% reduction in this area. This has been achieved through the continued transition to renewable energy sources to power Formula 1 and F1 Teams sites.

Emissions from Travel have **reduced by almost 20,000 tCO_2e** compared to 2018, representing a 25% reduction in this area. This has been achieved through the increased rollout of remote broadcast operations, and F1 Teams making investments in Sustainable Aviation Fuel (SAF) for their race travel operations.

Emissions from Logistics have **decreased by 6,438 tCO_2e** compared to 2018, representing a 9% reduction in this area. To achieve this Formula 1 made a significant investment in new freight containers to allow for the use of more efficient 777 planes, invested in SAF for freight operations, and expanded the use of biofuel trucks for freight in Europe.

Event Operations emissions have **decreased by 12% on a per-race basis**. This reduction has been driven by continued efforts across all Formula 1 stakeholders to transition to renewable energy sources at events, alongside key suppliers adapting their operations to lower emissions. While total event operations emissions for the 24-race calendar have increased slightly by 247 tCO_2e, this reflects the addition of three more Grands Prix compared to 2018.

This report provides details of our carbon accounting, as well as case studies of key initiatives that have been implemented to help achieve the reduction to date.

Stefano Domenicali, President and CEO of Formula 1, said:
"We are strongly committed to achieving Net Zero by 2030. It is a concrete goal, already visible in the significant reduction of our sport's carbon footprint. While continuing to grow globally, we have shown that sustainable development is possible and that the strategies we have adopted are yielding tangible results.

"Formula 1 has always been synonymous with innovation and the desire to improve. Once again, this mentality has allowed us to make important progress, not only for those who work in this world, but also for society as a whole.

"We will continue to pursue our projects and next year we will introduce new actions, such as the use of advanced sustainable fuels in all Formula 1 cars, a step that also opens up significant opportunities for road cars and other means of transport.

"We are proud of what we have achieved so far and remain determined to continue on this path. Thank you to the FIA, the teams, partners and promoters for their fundamental contribution along this path."

Ellen Jones, Head of ESG at Formula 1, said:
"Today's results are the product of years of hard work across the sport. All areas have been tasked with operating more sustainably, and it is through this sport-wide engagement and delivery that we are able to achieve such significant emissions reductions.

"Looking ahead, we have a clear plan to meet our commitments and to further demonstrate how growth can be positive for both sustainability and sporting outcomes. Formula 1 is uniquely placed to show that performance and sustainability can support one another, and I look forward to seeing the impact of initiatives already announced - such as changes to our race calendar from 2026 - as well as those yet to come, to help us deliver on our goals and beyond."

WHAT'S NEXT?

We have worked hard with partners across the sport to put in place the foundations to ensure delivery of our strategy, and in the coming years we will see these ramping up in three key areas, with associated further reductions on our way to Net Zero 2030.

1

Continued investment in alternative fuels strategy, including coordinating cross-sport investment in Sustainable Aviation Fuel to drive down emissions of our global season, biofuels for road and sea freight, and advanced sustainable fuels in our cars from 2026.

2

A future race operations programme that will see the increased use of sea freight vs air freight, and enhanced use of strategically positioned regional hubs.

3

Sport-wide solutions to continue progress to net zero, bringing all stakeholders of our sport together to combine solutions for greater impact and faster delivery, such as an expansion to our SAF framework and aligned operational activities.

DELIVERY SINCE 2018

As we work to deliver for our 2030 target, all parts of Formula 1 have been acting individually and as a group to drive down the carbon footprint. This includes:

19% reduction in related emissions

Significant investments in Sustainable Aviation Fuel (SAF) have been made as part of our ultra-efficient logistics strategy. Our combined 2024 investment in SAF with Global Partners DHL and Qatar Airways **reduced total related emissions by more than 8,000 tCO_2e** (tonnes of carbon dioxide equivalent), an approximate **19% reduction in related emissions** – compared to traditional aviation fuel – for the air freight charter programme operated by Formula 1 across the flyaway events of the 2024 season. This investment will grow in the years to come.

140 personnel working remotely each race weekend

Investments in remote broadcast operations which means that Formula 1 deploys the world's largest intercontinental remote production system every race weekend from our Media & Technology Centre in the UK. Formula 1 has been adding additional remote capabilities since the project was first accelerated into place in 2020 and now has approximately **140 personnel working remotely at each race weekend**. In 2024, the new state of the art F1 Studio at the M&TC added new opportunities for remote broadcasting, which simultaneously reduces the need for equipment and people to travel to races, helping us reduce our carbon footprint.

9,000 tCO_2e reduction in carbon emissions

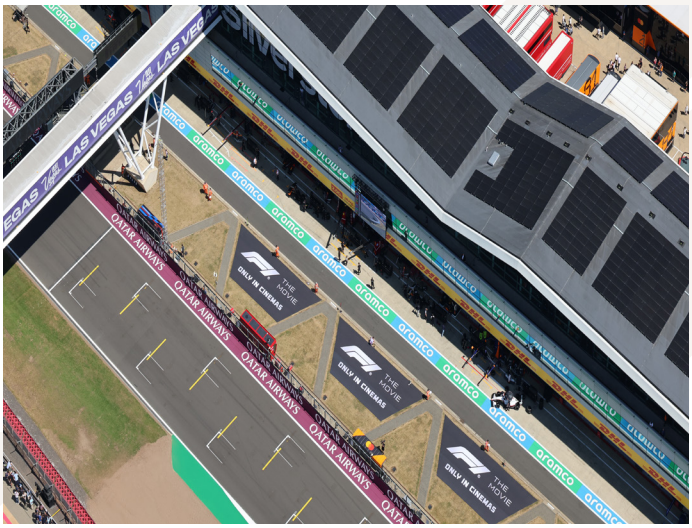
Formula 1 invested in new freight containers to allow for the use of more efficient 777 planes where available, with significant associated emission reductions. This change has led to an estimated **9,000 tCO_2e reduction in carbon emissions.**

59% reduction in carbon emissions for F1 factories & facilities

Emissions from Factories and Facilities for the sport have **reduced by over 34,000 tCO_2e** compared to 2018, representing a 59% reduction in this area. This has been achieved through the continued transition to renewable energy sources to power Formula 1 and F1 Teams sites.

80% of events powered using alternative energy

80% of our promoters powered aspects of their events using alternative energy sources such as solar panels, green tariffs, and biofuels, with plans in place at all others to begin in the coming years.



09 European races using low-carbon energy system

Working with Aggreko, the delivery of innovative low-carbon energy generation systems using renewable sources such as hydrotreated vegetable oil (HVO), biofuel, solar panels, and battery. Following trials at one Grand Prix in 2023, the system was expanded to three races in 2024. From 2025, the programme has been rolled out to **reduce more than 90% of event-energy emissions at all European Grands Prix** in key areas such as the Paddock, Pit Lane, and Event Technical Centre.

83% reduction of related carbon emissions by biofueled trucks

Formula 1 Management equipment for our European season is delivered by a fleet of **biofueled trucks which reduce related carbon emissions by an average of 83%**. The use of biofuel trucks in Europe is increasing across the F1 teams too.

100% FSC Certified Tyres

Throughout the 2024 season, all Formula 1 cars operated with FSC approved Pirelli tyres, which means the natural rubber in the tyre complies with the FSC's strict standards for sustainable forestry. FSC certification joins a number of initiatives already put in place for motorsport by Pirelli in recent years, which includes all tyres brought to the track during a Grand Prix weekend being transformed into secondary raw materials after use; the electrical energy used to make the tyres coming exclusively **from 100 per cent renewable certified sources**; and the use of 'virtual' design technology for all tyres, which not only reduces development time but also cuts down on materials used due to less physical prototypes being needed.

2024 Improvements to the flow of races

In 2024, **improvements were made to the geographical flow of races** around the world. This included moving the Japanese Grand Prix from September to April to align with the Asia-Pacific segment of the calendar; adjusting the Azerbaijan Grand Prix to align with Singapore; and scheduling the Qatar Grand Prix to run back-to-back with nearby Abu Dhabi. From 2026, the Canadian Grand Prix will be held in May, while the Monaco Grand Prix will move to June. This change consolidates the European leg of the F1 season into a single period, **eliminating an additional transatlantic crossing for vital freight and equipment** and delivering significant associated carbon reductions.

55% F2 & F3 cars ran on advanced sustainable fuel

In 2024, **F2 and F3 cars ran on 55% advanced sustainable fuel blend,** developed by Formula 1 Global Partner Aramco, and the FIA medical and safety cars operated with a 40% blend. In 2025, the F2 and F3 cars moved to be fully powered by advanced sustainable fuel, in preparation for Formula 1 to be fuelled entirely by advanced sustainable fuel in 2026 alongside the new hybrid engines that will take to the circuit next year. The technology has broad off track implications for the automotive industry and existing road cars, as the fuel developed for Formula 1 is designed to be 'drop-in' capable for potential usage in road cars - serving as a fuel alternative with potential global benefits in associated carbon reductions.

APPENDIX

SCOPE AND BOUNDARY

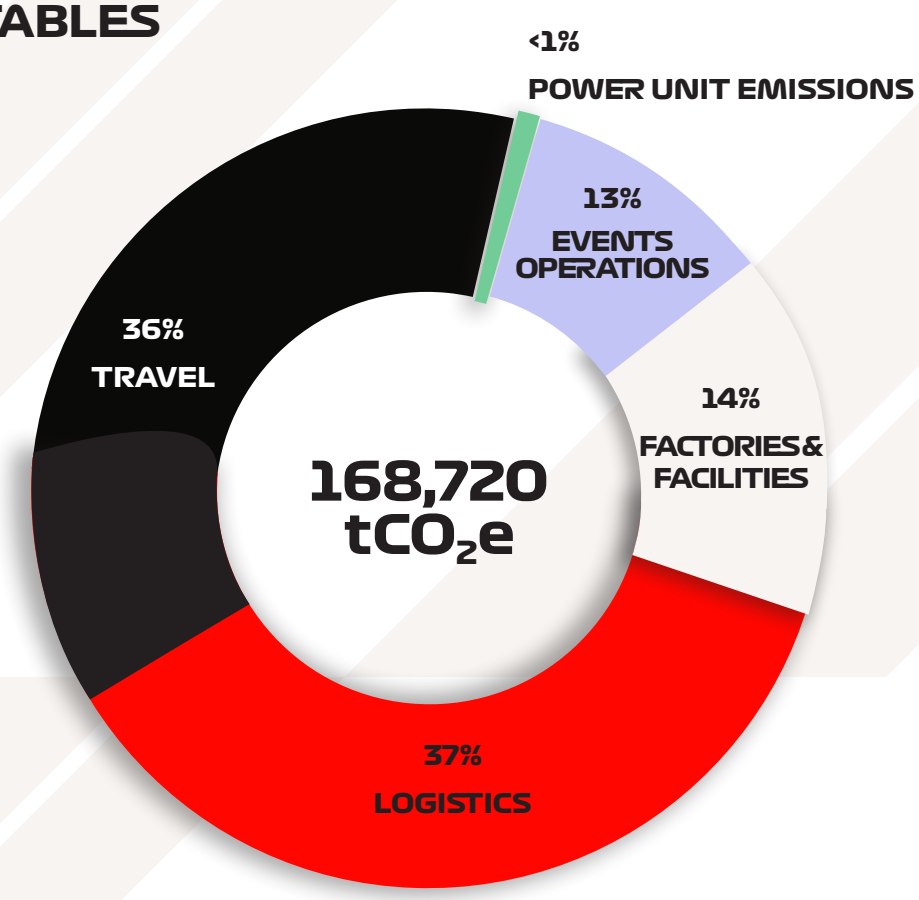
Our Net Zero by 2030 commitment engages our wider sport in carbon reductions across our race operations and includes the Formula 1® Group, all F1® Teams, Race Promoters, logistics service providers, and key suppliers such as our tyre manufacturer and Paddock catering.

The commitment was set in accordance with the science from the Intergovernmental Panel on Climate Change (IPCC) – aligning with its definition of Net Zero emissions. Our Net Zero Carbon commitment requires a minimum 50% reduction in absolute emissions against a 2018 baseline, calculated using guidance set by the Greenhouse Gas Protocol.

The boundary was set up with the intention of driving climate action across the sport. This has been achieved as stakeholders across the sport are driving emission reductions and reporting on their progress through the Net Zero 2030 commitment. The members of our sport have since taken the next steps to map their relative organisational boundaries, set individual reduction targets, and report publicly on their progress. The scope and boundary of their reporting vary based on the reporting requirements of the company.

DATA GRAPHS & TABLES

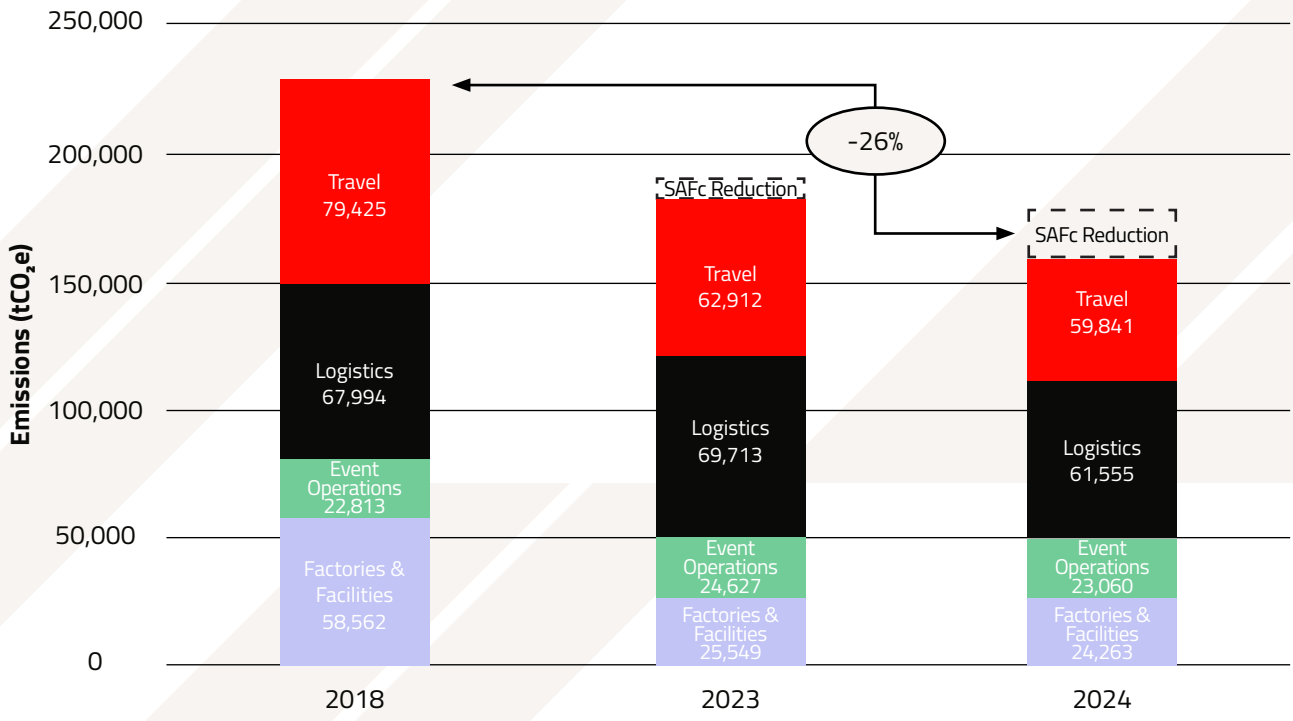
2024 CARBON EMISSIONS (tCO_2e) - MARKET-BASED INCL. SAFc



EMISSIONS TABLE WITH RE-STATEMENT OF 2018 EMISSIONS (tCO_2e)

		Without SAFc			With SAFc		
Value Chain Segment	**Original 2018**	**Re-stated 2018**	**2023**	**2024**	**Re-stated 2018**	**2023**	**2024**
Factories & Facilities	50,992	58,562	25,549	24,263	58,562	25,549	24,263
Logistics	115,577	67,994	69,713	70,341	67,994	69,713	61,555
Event Operations	18,916	22,813	24,627	23,060	22,813	24,627	23,060
Travel	71,066	79,425	69,607	71,068	79,425	62,912	59,841
Total	**256,551**	**228,793**	**189,496**	**188,732**	**228,793**	**182,801**	**168,720**
						-20%	**-26%**

F1 SPORTING EMISSIONS - MARKET-BASED WITH SAFc (tCO_2e)



DATA METHODOLOGY

The F1 Carbon Footprint is calculated in line with the Greenhouse Gas Protocol guidelines following an operational control approach for Formula 1 Group emissions sources. As described above there are additional emissions sources included in the 2030 Net Zero Carbon Commitment from F1 Teams and Promoters that F1 does not have operational control over.

Due to increased efficiency and maturity of data collection for both F1 and the wider-sport, reporting timelines have been brought forward significantly from previous years. This is a critical step in our net zero commitment, enabling faster course correction and decision making when adjusting our emission reduction strategies.

Emissions are calculated under a market-based methodology.

Formula 1 have prioritized using activity and supplier data for emissions calculations to ensure a precise footprint is calculated. In 2024, over 90% of total emissions were calculated using activity and supplier data.

To reflect our international operations, emission factors from the most applicable databases were used, these included: Department for Energy Security and Net Zero (DESNZ), International Energy Agency (IEA), The Association of Issuing Bodies (AIB) and supplier provided emission factors.

SUSTAINABLE AVIATION FUEL METHODOLOGY

F1's approach to reporting emissions reductions from Sustainable Aviation Fuel Certificates (SAFc) is informed by the guidelines outlined in World Economic Forum & Clean Skies for Tomorrow - Sustainable Aviation Fuel Certificate Emissions Accounting and Reporting Guidelines.

This includes calculating full life cycle emissions for Air Cargo and Air Travel on a Well-to-Wake basis before applying the emissions reductions from the volume of sustainable aviation fuel (SAF) purchased for the reporting year.

For full transparency, Formula 1 follows the recommended dual-reporting methodology for the emission categories where SAFc are applied.

The SAF Certificates procured by F1 have been certified by an independent third party that they align with the requirements of an internationally recognised certification scheme e.g., ISCC, RSB.

RE-BASELINING POLICY

Our baseline year is set for 2018. Re-calculation of base year emissions is required when significant changes affect the inventory boundary or emissions calculation including structural changes, methodological changes, error corrections. Formula 1 sets the threshold for base year recalculation at 5%. In 2024, due to improved data quality and methodology changes F1 exceeded the 5% threshold and completed a re-baselining exercise.

This exercise was completed using best practice recommended by the Greenhouse Gas Protocol. For transparency a comparison between the previously reported 2018 footprint to the re-stated 2018 footprint can be found earlier in the Appendix.

GOVERNANCE & ASSURANCE

Formula 1 is consistently improving data quality and assurance procedures. In addition to our statutory reporting such as the United Kingdom's 'Streamlined Energy and Carbon Reporting' and TCFD aligned disclosure requirements, Formula 1 also voluntarily reports through the following processes:

Since 2020, Formula 1 has been a signatory of the UN Sports for Climate Action, a UN-led initiative that aims to provide a clear direction for the global sports community to reduce GHG emissions in line with the Paris Agreement, and aims to use sports as a unifying tool to encourage citizens' engagement in climate action.

For the reporting of our Net Zero by 2030 carbon commitment, the re-stated 2018, 2023, and 2024 season data emission calculations have been completed through a third-party carbon reporting platform. The platform improves the accuracy and transparency of calculations with visibility over data input, categorization, and calculation methodology.

For the planning of events, Formula 1 maintains an ISO20121: 2012 Event Sustainability Management certification in addition to the FIA 3 Star Environmental Accreditation (the highest level of environmental sustainability recognition from the sport's governing body). A certified Sustainability Management System is in operation for the planning and execution of events for the FIA Formula One World Championship™, Formula 2 Championship™ and Formula 3 Championship™.