



ABOVE The ambition is for F1 to become a laboratory for environmentally beneficial innovation

Formula 1's carbon neutral plans announced

F1's ambitious sustainability plan has been more than 12 months in the making. **William Kimberley** reports

FORMULA 1 has announced its plan to become carbon neutral by 2030 and for all race events to be sustainable by 2025.

The aim is to eradicate its carbon footprint of activity at racetracks as the sport attempts to burnish its green credentials to appeal to commercial sponsors and younger fans. The initiative includes road and air transport of staff and equipment to the events and follows 12 months of talks with the FIA, sustainability experts, F1 teams, promoters and partners, all of whom are on board with the scheme.

It was calculated that the sport's total carbon emissions in 2018 was 256,551 tonnes – not including fans' transport to races – which is the equivalent of

providing energy to approximately 30,000 homes for the same period. It comprises:

- Logistics (road, air and sea freight) 45%
- Personnel travel 27.7%
- Factories and facilities 19.3%
- Events 7.3%
- Total F1 car emissions including all race and test mileage: 0.7%

F1 says it will "move to ultra-efficient logistics and travel and 100% renewably-powered offices, facilities and factories". It will offset emissions that cannot be cut through a combination of replanting trees and using the engineering know-how in the sport to develop new technologies that can capture carbon from the atmosphere. Its first step is to begin carbon-reduction

projects immediately and make all events "sustainable" by 2025. This includes eliminating single-use plastics and ensuring all waste is reused, recycled or composted. Those emissions that cannot be eliminated will be matched by offsetting measures such as carbon sequestration or planting trees. Additionally, race organisers will provide incentives and tools to offer fans a greener way to reach events. The race calendar will also be changed so teams fly less between events.

With F1 engines having a thermal efficiency rating of 50% compared to the 30% or so of a production road-car petrol engine, F1 is hoping to work with the automotive industry to apply the lessons of F1's engines to create "the world's first net-zero carbon hybrid internal combustion engine". The current engines will continue until the end of 2025, but F1 is looking at ways of ensuring that whatever specification of engine is used from 2026

takes another step forward in efficiency.

F1's plans to reduce its footprint include running cars on fuels generated from household waste or algae, saying it will work with suppliers such as Royal Dutch Shell, ExxonMobil and Petronas, to produce enough biofuel to run its race cars fully by the end of the next decade.

In-depth conversations with OEMs on this area have not yet begun but they will focus on the development of synthetic fuels, which use carbon captured from the air, farm waste or biomass. In 2021, rules will demand that the petrol used in F1 has a biofuel content of at least 10%.

F1 says all have signed up to the project and some have already started working towards this goal. Reigning World Champions Mercedes, for example, says it has been powering its two F1 factories in the UK entirely by renewable energy since early October. It is on target to have net-zero carbon emissions by the end of next year, through a combination of reducing CO2 emissions and offsetting.

Six-time champion Lewis Hamilton has also pledged to ensure his life and business activities are carbon-neutral by the end of

the year. Praising the virtues of a plant-based diet in reducing greenhouse gas emissions, he is working with Mercedes to make relevant changes. After selling his private plane last year, after being accused of hypocrisy because of his role in F1 and the number of flights he has to take as part of his job, he admitted the subject was "not easy but that doesn't mean you should be

the world, delivering more power using less fuel, and hence CO2, than any other car.

"We believe F1 can continue to be a leader for the auto industry and work with the energy and automotive sector to deliver the world's first net-zero carbon hybrid internal combustion engine that hugely reduces carbon emissions around the world."

"This strategy is in line with initiatives

"The world's first net-zero carbon hybrid internal combustion engine"

afraid to speak out for positive change."

Chase Carey, the chairman and chief executive of F1, said: "Over its 70-year history, F1 has pioneered numerous technologies and innovations that have positively contributed to society and helped to combat carbon emissions. From ground-breaking aerodynamics to improved brake designs, the progress led by F1 teams has benefited hundreds of millions of cars on the road today.

"Few people know that the current F1 hybrid power unit is the most efficient in

started some years ago by the FIA with the creation of the Environmental Accreditation Programme, more recently with the FIA Environment and Sustainability Commission, and researches on renewable racing fuel," said FIA president Jean Todt. "With the involvement of the teams, drivers, F1's numerous stakeholders, and crucially the millions of fans around the world, the FIA and Formula 1 are committed to driving development and ensuring motorsport grows as a laboratory for environmentally beneficial innovations." **IT**

BELOW Total emissions from the actual races make up a fraction of the sport's carbon footprint

