

ES7: Emission efficiency

1- Carpooling

At CAE, carpooling is a top priority. We have three buses with 15 seats each to make staff transfers easier. According to car-emission.com, these buses have an average fuel consumption of 42.6 MPG or 6.9 liters/100km with an average CO2 output of 167.9 g/km. On average, these buses travel a distance of 30 km (18.6 miles) per back-and-forth journey, resulting in 90 km daily (55.9 miles). By doing the math, we find that the buses produce 15k of CO2 emissions daily. However, if we were to remove the buses, 45 cars would take their place, each one of those traveling 30 km. The overall traveling distance in km is 1350. Each vehicle emits an average of 176.4 g/km of CO2 per car. That translates to 5k in each km, resulting in 238k CO2 emissions daily for the 45 vehicles traveling 30 km.

2- Go paperless

Another attempt toward sustainability is taking the first steps toward going paperless. CAS now mandates that all correspondence between the dean's office (or other administrative offices) and scientific departments be by email only. Based on a recent survey in CAE, each scientific department consumes, on average, about 500 sheets daily. Using emails instead of paper decreased this paper consumption by 10%. This saved 50 sheets daily, 1000 sheets monthly, and 12k yearly. This means CAE saves a tree (with a 13-meter height) every year alone. These calculations are calculated based on <https://ribble-pack.co.uk/>. Based on <https://onetreepanted.org/>, you release 48 pounds (21.7 kg) of CO2 into the air when you cut a mature tree.