

International Aviation

In 2015, Las Vegas had about 42 million visitors. 18 million of these travelled by air. 6 million visitors came from abroad. 70% of the international visitors came from the UK, Mexico or Canada. We estimate that international visitors travelled a total of 45 billion miles on their trips producing 6 million tons of CO₂ emissions.

Projections suggest total visitation might be 60 million visitors a year by 2050.

The question of how to account for energy use in international travel has not been resolved. Should one budget the energy consumption entirely as US consumption or should the departure countries energy budget bear some of the burden?

We simply take the jet fuel consumption in 2014 in Nevada and scale it by the percent change in the number of visitors. The EIA website lists Nevada jet fuel consumption in 2014 as 28 trillion Btu/year or 0.9 GW.

Levels 1 and 2 assume that air travel efficiency increases by 0.9% per year to 2050; a 27% increase in efficiency. Level 3 assumes a 33% efficiency gain in aviation energy use by 2050.

Level 1
30% of visitors might come from abroad. This would result in a factor two increase in fuel consumption.

Level 2
We assume the number foreign visitors increases in proportion to the total increase in visitation, 8.4 million foreign visitors by 2050.

Level 3
We assume that a carbon tax is passed in 2030; the number of foreign visitors in 2050 similar to that in 2015.

Level 4
A large carbon tax renders flying for tourism purposes unaffordable; international flights for tourism cease in 2050.

