@blessyouboys

Carbon Reduction Challenge – THE HOME STRETCH
July 20, 2020

1. No in-depth survey needed (with some exceptions)

2. Prepare a bulleted summary of your project containing 3 main sections:
   A. brief summary of your proposed change to pre-pandemic operations, noting scale and duration of your proposed changes
   B. estimates of carbon and costs savings calculations (show your work)
   C. list of key assumptions that underlie your estimates in 'B'

3. Share this brief project overview with the CRC team and with your workplace contacts/stakeholders for feedback. Do they follow your calcs? Do they agree with your assumptions? How could you refine your project to have the greatest chance for implementation?

4. Work towards final report, template linked here.

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Example: working remotely

Proposed change: 40% of 2,000-person company shift to 2-day-a-week remote work

How many gallons of gasoline are saved?

average commute length: 30 miles roundtrip (from pre-survey or other source)
miles driven per year per worker: 30 miles * 250 days = 7,500 miles per year
average miles per gallon fuel efficiency: 25.5 miles per gallon (EPA source [here](#))

gallons per worker assuming 5 days/week commuting: 294 gallons
gallons per worker assuming 3 days/week commuting: 176 gallons
gallons saved: 118 gallons

CO_2 saved: 118 gallons x 20 lbs CO_2/gallon = 2,360 lbs CO_2
cost saved: 118 gallons x \$2/gallon = \$236 (not including reduced maintenance, parking fees, etc)

co-benefits: greater worker satisfaction, reduced parking demand, less dense work environments conducive to social distancing during pandemic

Example: reduced air travel

Proposed change: replace 50% of organization's air travel with remote meetings, beginning with trips of 1 day or less

How many gallons of jet fuel are saved?

average flight length: 2 hrs (a guess, but probably good to within a factor of 2)
CO_2 emitted per 2hr round trip flight: 700lbs (using [this calculator](#))
flights pre-pandemic: 1000/yr (your org probably has good data on total # flights taken pre- and post-pandemic)

CO_2 air travel pre-pandemic: 700,000lbs/yr (does not include rental car at destination)
CO_2 air travel post-pandemic: 350,000lbs/yr

cost saved: 500 fewer trips x $1,000/trip (accounting for air travel, hotel, per diem) = $500,000/yr

co-benefits: better work/life balance for workers, less unproductive time wasted, less exposure to COVID19