1. Oregon used 2.57 x 10^10 Joules per capita in 2019. How many wind turbines (at both efficiencies) producing energy for how much time would it take to power one person's energy use in the lowest and highest average wind speed counties in Oregon for a year?

In the county with the highest average wind speed one turbine at 98% efficiency generates 9102.72 j/s , and at 10% efficiency it produces 2089.91 j/s. So it would take 4.66 (round to 5) turbines 1 week to produce that much power at maximum efficiency. It would also take 20.33 (round to 21) turbines 1 week to produce that much energy at 10% efficiency.

In the county with the lowest average wind speed one turbine at 98% efficiency generates 371.25 j/s, and at 10% efficiency it produces 85.24 j/s. So it would take 114.46 (round to 115) turbines, operating at 98%, 1 week to produce that much energy . As well it would take 489.51 (round to 490) turbines, operating at 10%, 1 week to produce that much energy.

2. How much energy is contained in each kg of coal burned?
   2.312 x 10^7 joules in every kg of coal burned

3. How many kg of coal per capita per year must be burnt to fuel the energy needs of the average Oregonian?
   Around 1112 kg of coal need to be burned per capita per year to fuel the energy needs of the average Oregonian.

4. How many lb of CO_2 per capita would we reduce per year if we switched completely to wind power? According to the U.S. Energy Information Administration we emit 210.4 lb of CO_2 per 1 x10^9 Joules of energy produced from coal in Oregon.
   25.7*210.4 = 5047.28 lbs
   Thus if we switched to exclusively to wind power then we would reduce our CO_2 per capita per year by 5047.28 lbs.

5. What does this mean to you?
   This is a huge amount of CO_2 that we could be cutting back on if we used all wind Power. I truly think we need to cutting back on all the emissions in oregon and in the world as well. We need to try and fix this huge problem and we can do so one step at a time. One less coal powered plant is a huge difference and one more wind turbine is a massive step in the right direction.