**If you’re watching this video on the day of publication, then there’s a good chance you’re in the middle of getting ready to do whatever it is you’re doing for the Christmas break next week. So, I thought I’d keep this one reasonably short and snappy so you can get on with your preparations.**

**What this video might also do is provide you with some easy data and statistics to use if you get into a long discussion about the climate emergency with your cranky uncle over the Turkey dinner.**

**So here goes…**

**Hello and welcome to Just Have a Think,**

**First and foremost, I just want to offer my heartfelt thanks to you for supporting my work here at Just Have a Think over the last 12 months. It’s been a heck of a year, one way or another, so I’m incredibly grateful for you watching my videos and for those of you who have left comments and feedback during twenty-twenty-four.**

**With your help, we’ve achieved our target of six hundred thousand subscribers too. If you haven’t subscribed already, then it would be great to have you on board to give the channel a really strong start going into the new year and get us well on the way to the seven hundred thousand subscribers target by the end of twenty twenty-five. It’s absolutely free, and I promise you won’t get any spammy emails from me or anyone else. And it’s just a simple click on the subscribe icon below this video on YouTube.**

**Right, down to business. How has twenty-twenty-four shaken out from a climate and energy transition perspective?**

**Well, a recent report by the EU Space Programme tells us that twenty-twenty-four is virtually certain to be the first calendar year in recorded history with an average global surface temperature one-point-five degrees higher than pre-industrial levels. In fact, it looks like we’ll be closer to one-point-six degrees. That’s above the limit set by the historic twenty-fifteen Paris Agreement, and it’s pushing us rapidly towards the outer edge of a zone described by Professor Johan Rockstrom as ‘the corridor of life’.**

**“And if you look 3 million years back, we never exceeded 2 degrees Celsius [above pre-industrial levels]. That’s the warmest temperature on earth during the entire Quaternary. The coldest point – minus 5 degrees Celsius : Ice Age. I call this ‘The Corridor of Life’. And we’re following a pathway that takes us to 2.7 degrees Celsius in only 70 years.”**

**That temperature increase is just an average of course. Which means some places are hotter than others. Southern Europe for example is facing serious heat stress already.**

**This chart shows the number of south-east European summertime days with temperatures exceeding thirty-two degrees Celsius. And when I say exceeded, I mean really exceeded. There are now regular periods all over continental Europe where temperatures push up above forty degrees for days on end.**

**Now if you think forty degrees Celsius, or a hundred and four Fahrenheit is no problem, then consider the trajectory of travel, which is almost certainly only going in an upward direction in the coming years.**

 **If you live in more southerly regions, and you’re unfortunate enough to have to work outside all day, then you will no doubt already know how debilitating, and even life-threatening those temperatures can be.**

**Arguably the most perplexing and scariest phenomenon recorded by climate scientists and oceanographers in twenty-twenty-four was the sharp uptick in ocean temperatures.**

**They were already off the charts in twenty-twenty-three with devastating marine heatwaves damaging ecosystems all over the place. And twenty-twenty-four has shown no let up at all.**

**Our oceans have absorbed more than ninety percent of all greenhouse gas-induced heating since the start of the industrial revolution. But those oceans are not an infinite dumping ground. Scientists fear our rapidly warming waters might now be starting to release that heat back to the atmosphere.**

**Which is not ideal, is it? It’s not just a heat problem either. The water that evaporates off goes up into an atmosphere that physicists tell us can retain seven percent more moisture for every degree Celsius of warming.**

**That moisture is intensifying rainfall and contributing to more extreme flooding events in many parts of the world and more devastating hurricanes and typhoons.**

**A recent comprehensive global climate and health analysis published in the Lancet included this chart showing a marked increase in the number of extreme precipitation events, which they define as ‘those exceeding the ninety-ninth percentile of daily precipitation during the baseline of 1961 -1990.’ In other words, the very worst of the worst extreme events.**

**The lancet also pointed out that while some regions suffered deluges of rain, others experienced very damaging heatwaves and droughts.**

**Nearly half of all the land area on the planet was affected by at least a month’s worth of extreme drought during twenty-twenty-four. Nearly 30% of the planet saw three months-worth, and more than ten percent suffered for half of the entire year. Something that was pretty much unheard of until the nineteen-nineties. That brings major challenges for human health, ecosystem survival, food security and even infrastructure like electricity grids.**

**Water expands as it gets warmer as well, so sea levels are rising as a result.**

**Those sea level rises are compounded by land-based ice melting into the sea in places like Greenland and Antarctica, as well as the enormous but much less well publicised glaciers of the Himalayas and other mountainous regions, the increased meltwater from which now cascades down through towns and villages causing life changing devastation on its relentless journey to the coast.**

**That’s water that used to melt in a manageable way during the summer and refreeze during the winter in a sustainable cycle that hundreds of millions of people relied on. When those glaciers have gone, that cycle will stop, and those people will need to look elsewhere for their daily water supply.**

**And what is the global response to these accelerating existential risks? Well, some countries are doing better than others, but overall, as this chart shows us, levels of carbon dioxide, nitrous oxide and methane continue to rise, with really no sign at all of a downward shift in the trend line. According to the folks at the Global Carbon Budget website, global greenhouse gas emissions specifically from fossil fuel were about eight percent higher in twenty-twenty-four than they were in twenty-fifteen when the Paris Climate Agreement was signed by a hundred and ninety-five countries plus the European Union.**

**So that’s an epic fail really, isn’t it?**

**And just to cap off a truly cataclysmic year for our climate, the person who is about to become the most powerful leader in the world offered this piece of astonishing wisdom.**

**“…we will not allow it to be spent on meaningless ‘green new scam’ ideas. And I will end the electric vehicle mandate on day one!”**

**If the new US president goes through with his campaign trail pledges then the next four years will see significantly regressive climate policies across the pond while the rest of the world continues to push ever harder towards ambitious carbon reduction targets by twenty thirty.**

**Now, I wouldn’t want to be sending you into the festive period with no hope at all in your heart, so I’ve saved a set of slightly more optimistic charts to finish off with. They won’t solve all the problems we’ve looked at today. Not by a long chalk. But they do at least represent one faint glimmer of hope.**

**The world really is adopting renewable technologies like solar, wind and battery storage at a breathtaking pace now, led by China of course, who by the way may well be reaching peak emissions in the early part of twenty-twenty-five as that country’s meteoric infrastructure expansion comes to an end and electric vehicles displace the combustion of gasoline.**

**And speaking of electric vehicles, here’s how that progress is going. If you’ve been listening to certain elements of the media recently, even including the self-proclaimed neutral and impartial BBC here in the UK, then you’d be forgiven for thinking that sales of electric vehicles have completely fallen off a cliff in the last twelve months. These charts show conclusively that that narrative is just a straightforward lie. Obviously the Unites States of America is showing the greatest level of intransigence out of all developed nations, and as we’ve just seen, that’s likely to get worse not better over the next four years. But it does look very much like everyone else in the world is joining in.**

**Which is nice.**

**So, there we are then folks. The overall climate situation is extremely serious, and there is a great deal of work to do. And when there’s work to be done, sitting down and giving up is absolutely not an option. So, whatever you can do in twenty-twenty- five, whether it’s direct peaceful activism, or eating less red meat, or ditching your gas guzzler for an electric alternative, or lobbying your elected representative, or simply divesting your hard-earned money away from any banks, building societies, insurance companies or pension funds that invest in fossil fuel projects, then get on and do it. Maybe make it your New Year’s resolution, eh?**

**I’m off to see my extended family for a few days now, which means there’s no Just Have a Think video next Sunday. So, that just leaves me to wish you a very peaceful festive period and a Happy New Year, and I’ll see you bright and breezy in twenty-twenty five.**

**Thanks very much for watching. And remember to just have a think.**

**See you next year.**