



MAKERS OF GOOD

Covid-19 and climate change – the defining challenges of our generation

By Stephen Harrison | 3 April 2020

Thirty-six years ago, in Reykjavík, Gorbachev and Reagan had a historic meeting which heralded the beginning of the end of the cold war. Although discussions at that summit collapsed at the last minute, talks resumed in 1987 and the resolve of those two courageous leaders ultimately lifted the threat of nuclear war globally.

They rose to a defining challenge of their generation and their collaboration gave us hope.

Do we now find ourselves staring into the face of the defining challenge of our generation as we look at Covid-19? Or has it been stalking us for the past few decades in the guise of global warming?

Perhaps the juggling act that will be required to resolve both problems in parallel over the coming years will be the defining challenge of our current generation of world leaders. There are many actions in place around the world right now to slow down the spread of the coronavirus. The idea is to flatten the curve of the infection rate and limit the impact of the potentially fatal Covid-19 illness that it causes. If we can slow down the spread of the virus with measures such as home working and social distancing, then our healthcare resources may just be able to handle the influx of patients. When the peak of the curve exceeds a nation's capacity to cure, that's when the problems begin to spiral out of control.



The situation that we are in during 2020 with this coronavirus is an acute analogy of a longer-term chronic battle that the world has been fighting against global warming. Temperatures are rising slowly, and the beginning of every exponential curve looks flat, but at some point, as we have seen with the Covid-19 infection cases, it turns upwards with alarming speed.

People are grappling for hope and positives during this period of fear, panic and despair. As examples, we read stories on social media of teams getting together for pay-day drinks on the internet and big-name CEOs are posting chirpy updates about their new home offices and how well their teams are adapting. Yes, these stories are uplifting. They spread hope in the short-term and share lessons about remote team working and virtual collaboration. Beyond those learnings and glimmers of hope, however, I have a wish that the world will learn a bigger lesson that may give us another sustainable reason for optimism.

My wish is that when this bug is behind us and when our human and political bandwidth begins to open again, that we continue to take global warming as seriously as we are taking the dramatic Covid-19 situation.

[World Energy Council holds online hydrogen workshop](#)

The finances that have been committed to immediate healthcare expansion, bridge the gap in people's incomes over the coming months, and keep businesses afloat are of a magnitude never seen before for a single event. They make the emergency support that was directed at the financial crisis of 2008 look like pocket money. As a percentage of GDP, they begin to compare to the amounts of money that were used for post-war reconstruction efforts in the 1940s.

When we have come through the next few difficult years and we are beginning to see the green shoots of recovery blossom into economic wellbeing, there will be many worthy claims for structural reinvestment. There will, quite rightly, be calls for our healthcare heroes and infrastructure to be reinforced so that they can cope with any future pandemics. Teachers will perhaps get the social and monetary recognition that they deserve as carers of our children whilst we work, in addition to educating them. And, if funds can also be made available in the future for projects that will reduce and reverse the pace of global warming, then we stand some chance of preserving the prospects for life on our planet and ensuring the health of future generations. After this short-term coronavirus crisis is over, we will need to get back to the business of thinking and acting long-term to decarbonise our way of life.

Green hydrogen

What kinds of decarbonisation projects can we look to? Well, in the endgame, green hydrogen must surely have a role to play as a renewable energy vector.

On the way there, blue hydrogen produced from natural gas with carbon capture seems like a viable stepping-stone. And carbon capture directly from the air (DAC) shows potential but will rely on abundant renewable electrical power to turn the clock back on carbon dioxide emissions from the past. The combination of green hydrogen with carbon dioxide to produce methanol is a high potential chemical synthesis pathway that can create either a green liquid fuel or building block to produce other chemicals that we have come to rely on.

In addition to these visionary projects, and there are many pilots in place to bring these visions to life, there are many proven and intermediate solutions which are helping to build a bridge to a sustainable future. Biomethane upgrades from biogas facilities may now be considered to be a mature technology that will have a long-term role to play in a mix of carbon neutral solutions. The conversion of coal-fired power stations to biomass combustion with carbon capture is a carbon negative solution that we could see implemented on a massive scale within the next decade.

Even the use of LNG in shipping to replace heavy fuel oils and the combustion of natural gas on thermal power plants instead of coal can reduce the carbon intensity of these processes. It's still a fossil fuel and there are still carbon dioxide emissions, but incremental steps can also help to move away from the status quo.

Some have questioned the wisdom of these interim measures as being distractions from the end-game, but the road is neither an easy one to navigate nor a quick one to travel and whilst it might be wishful to imagine that the money required to decarbonise our future will be found quickly, there are many other deserving and competing uses for it which will mean

that a pragmatic approach will be required. Hopefully, despite that pragmatism, we can get to that decarbonised end game before the clock strikes midnight.

As with Covid-19, we also need to flatten the global warming curve before it's too late.

As I write this, I am respectfully aware that many of my colleagues in industrial gases businesses around the world are putting in extra time and stretching the limits of their energy and ingenuity to ensure that medical oxygen supplies to hospitals remain secure.

Hot topic: [Oxygen supply shortage – fake news?](#)

Or, they are hard at work doing the engineering and installation work to build major vacuum, air and oxygen supply pipelines in new field hospitals on a scale and at a speed that would be unimaginable in 'normal' circumstances. I humbly take my hat off to these dedicated men and women whose work will save countless lives and bring hope to many more.

Beyond the role of industrial gases in the provision of medical oxygen, our industry also has a tremendous role to play in supporting the clean-tech solutions that will help to decarbonise our planet in the future.

Hydrogen production and distribution, distributive LNG, biomethane production and the capture and storage of carbon dioxide: these are emerging sectors in our industry that will have key roles to play. With all eyes on the coronavirus, these areas might not be quite so much in the spotlight just now, but the great work that is going into these sectors must also surely deserve our gratitude and applause and, perhaps also give us cause for hope.

About the author

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