

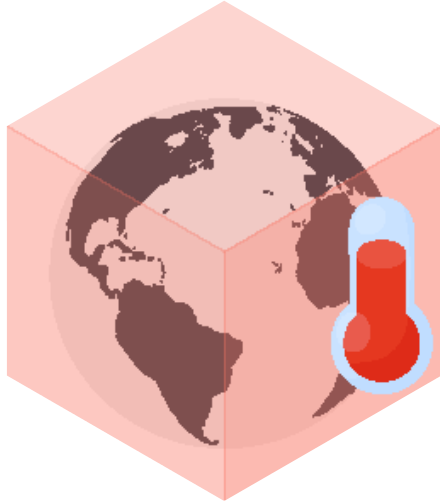


# Realigning to the Next Normal

Global Warming and Energy Management

# What is Global Warming?

Noun: A gradual increase in the overall temperature of the earth's atmosphere generally attributed to the greenhouse effect caused by increased levels of carbon dioxide, CFCs, and other pollutants.



## What has COVID-19 taught us?

- We are in an emergency
- How much wastage we were making
- We can live better with much less than we usually consume
- We have to do a lot more work to make our economy resilient
- We have to make our local economies self-sufficient
- We have to grow our food in our neighbourhood and in doing so, we will create more local jobs and stop the long-haul migration to the cities

The COVID lockdown has given us a sneak preview into the future if we are to meet the global temperature goals. We have no other choice if we are to believe our science experts.

Scientists like James Hansen predicts that even the human species may go extinct if we cannot control global warming.

But what about the battle against global warming.

In 2019 a teenager named Greta Thunberg passionately communicated to the world that we are in an emergency and no one was listening.

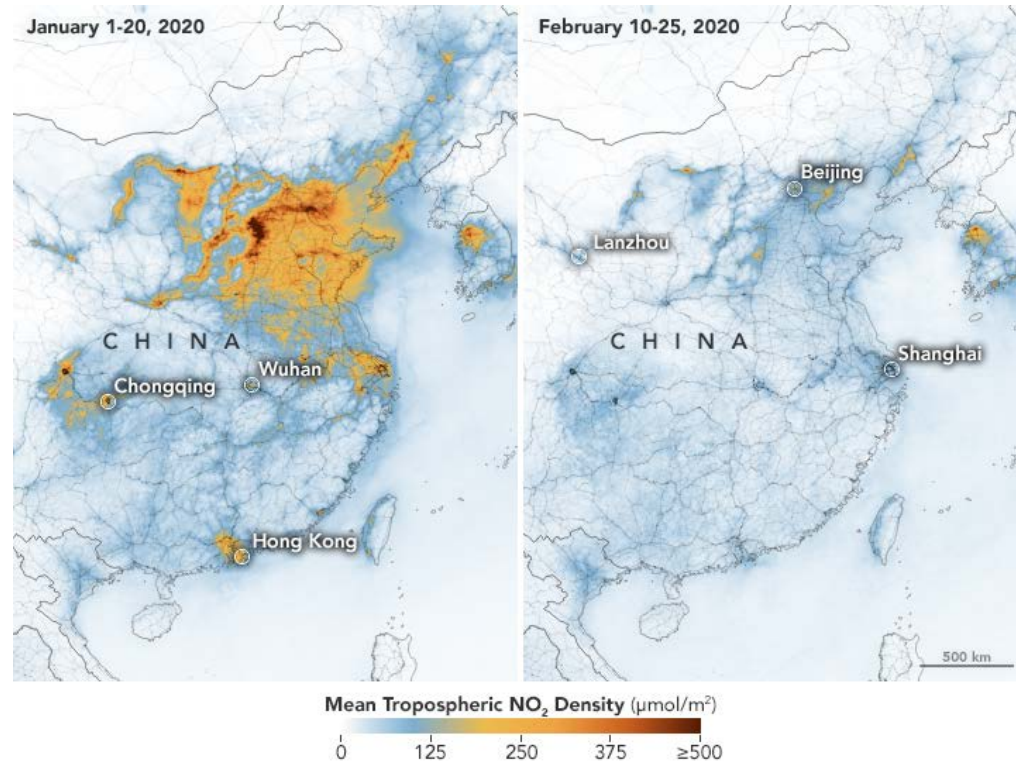
The UN reported:

- Up to 1 million: species threatened with extinction, many within decades
- Almost 33%: reef forming corals, sharks and shark relatives, and >33% marine mammals threatened with extinction
- At least 680: vertebrate species driven to extinction by human actions since the 16th century
- 16-21 cm: rise in global average sea level since 1900
- 100% increase since 1980 in greenhouse gas emissions, raising average global temperature by at least 0.7 degree
- 40%: rise in carbon footprint of tourism (to 4.5Gt of carbon dioxide) from 2009 to 2013
- 8%: of total greenhouse gas emissions are from transport and food consumption related to tourism
- 5%: estimated fraction of species at risk of extinction from 2°C warming alone, rising to 16% at 4.3°C warming
- Even for global warming of 1.5 to 2 degrees, the majority of terrestrial species ranges are projected to shrink profoundly.

The COVID-19 lockdown has taught us that we can win the battle against global warming. And, with a little bit more planning, we can do even better.

## How has the effects of Covid-19 effected carbon emissions and what can be learnt?

The current global situation with Covid-19 has seen a global reduction in carbon emissions since the outbreak.



While this by no means makes up for the suffering and fear the virus has caused, it is a small silver lining.

China's CO<sub>2</sub> emissions had fallen and it was confirmed by the Carbon Brief website that measures taken by China to contain the coronavirus resulted in reductions of 15 to 40% in output across key industrial sectors.

Jonathan Watts, The Guardian's global environment editor reports that: "If this trend continues, analysts say it is possible this will lead to the first fall in global emissions since the 2008-09 financial crisis.

The study shows that actions taken by authorities have inadvertently demonstrated that a hefty 25% carbon dioxide cuts can bring less traffic and cleaner air with only a small reduction in economic growth."

As a result of self-isolation across the world, millions of people are avoiding their usual commutes, school runs and shopping trips. Global air traffic decreased by 4.3% in February, even before countries started imposing travel bans for travellers from Europe and other 'high-risk' countries.

While there will, without a doubt, be economic disruption to energy investments across the year, it is also possible that the current situation could inspire long-term behavioural changes.

# The Business Response to Global Warming

## Social and economic impact



The devastating pandemic has exposed our vulnerability and fragile relationship with the global ecosystem like never before. Future business leaders will experience a heightened sense of responsibility to attain carbon neutral status, driven partly by the incoming millennials and increasingly important 'Corporate and Social Responsibility' departments. Companies will view critical actions through a sustainability lens.

A by-product of demonstrating proactive concern for the environment during, and beyond the crisis, will be more solid customer and supplier relationships, enhanced corporate reputations, and improved employee loyalty and productivity.

Where investment in high-tech fit out allows, offices of the future will undoubtedly be smarter; they will employ low energy technology to deliver and control environmental solutions, with an increased focus on alternative sources of power.

## Society, the working week and new employee expectations.



Nearly a third of office workers never want to return to the office!

Remote and home working is estimated to have increased by 25% in the UK over the last decade. There is no doubt that gradual growth will now have been turbo-charged by the Coronavirus outbreak.

The drastic and unprecedented steps that the country has had to take as a result of the Covid-19 outbreak are likely to lead to a number of permanent changes in how we live our lives. But will this extend to permanent changes to the environment in which we work?

Office landlords are likely to have seen requests for monthly rents, and possible rental holidays from businesses that are not able to use their offices, and a push to cut unnecessary service charge expenditure. However, most will regard the problem as being a short-term issue, and we should be back to normal after the school summer holidays.

Many of these office properties are a part of your pension fund – and whether you have enjoyed the working from home experience, what happens over the medium to long term for these landlords will affect a great number of people.

We could be seeing a seismic shift in the way business works with far less business travel – given it is so easy to Zoom/Skype, will we really want to go back to tedious airport security, train delays or long car journeys that are ultimately unproductive?

It's much more likely we will see even more money invested in technology to ensure that these online meetings are secure and resilient.

We will also finally realise that we don't need as much paper as we used to think we did.

## Travelling to Work

With the government strongly promoting active travel as a way to avoid public transport, and making £2bn of cash available to increase cycling infrastructure, it's a great time to consider buying a bike to get to work on.

An outright purchase can be expensive, although many brands offer finance to spread the cost. Using a Cycle to Work scheme is a really good way both to spread the cost of the bike and to get significant savings – between 32 per cent and 47 per cent of the purchase price.

The Green Commute Initiative (or GCI) is a social enterprise that looks to deliver a more flexible, cost effective bike buying experience via more than 1,500 bike shops and direct sales brands while still providing the tax saving benefits of Cycle to Work.

### All about e-bikes

Despite these initiatives it is believed that not enough of the onus is on charging points for e-bikes and other forms of urban-friendly electric transport. Co-founder of Turvec George Hosegood said: "The focus is very much on the development of e-charging stations for the automotive sector when consideration should be given to the wider demands of electric transport users, such as E-Bikes.

E-Bike sales are rapidly increasing, and use is growing significantly in the UK by both commuters and leisure users. Having access to bike charging lockers, particularly at transport hubs such as railway stations, can help cyclists who cannot charge them elsewhere, such as at work."

E-bike usage is growing in the UK, and it's thought that not enough provisions are being given to cyclists despite this growth. The bike industry believes e-bike sales will continue to rise into the next decade and beyond, and Turvec believe as the streets get more congested more commuters living in towns and cities will turn to the e-bike as their primary mode of transport.



## Electric Vehicles

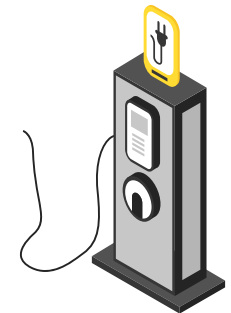
There is little doubt that the use of electric vehicles will increase over the next few years and the need to provide charging points will need to increase with that demand. Businesses will have to respond to this trend and ensure that facilities and incentives are available to what will be an ever growing 'environmentally aware' work force.

The effects of Covid-19 on the economy of the UK, and the resultant job losses, should not disguise the fact that there is a skills shortage within key sectors such as engineering. This will only be exasperated as potential staff leave the sector to seek alternative careers this reducing the numbers those in engineering who would be available for employment when growth returns. Providing facilities and environments to be able to attract the best staff, with a renewed focus on the environment will be key moving forward.

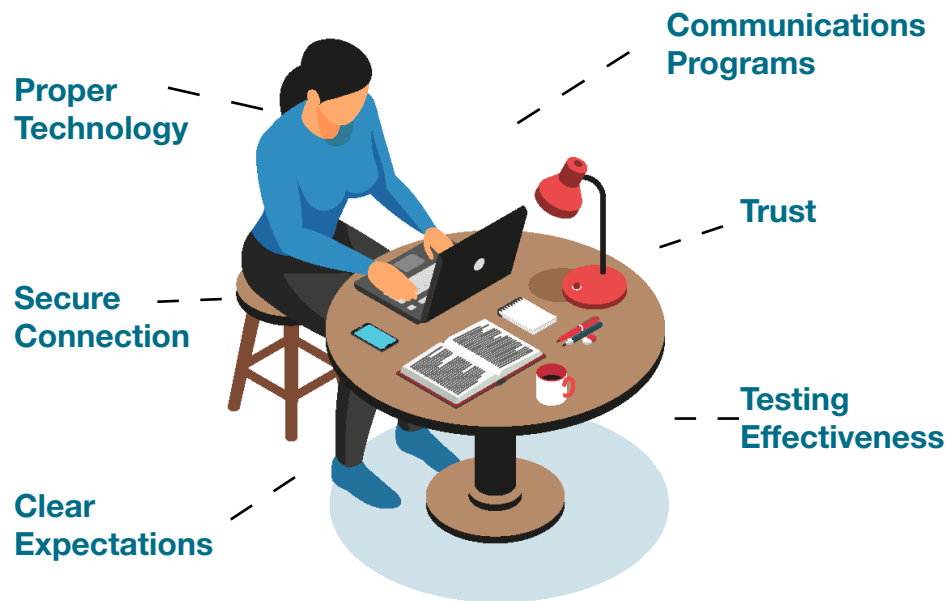
### Why Install Charge Points in Your Car Park?

Installing charging points to car parks is essential to:

- To accommodate the rapidly increasing number of electric vehicles
- To help ensure your car park is preferred over others by electric vehicle drivers
- To create a more environmentally friendly destination and to help meet local authority CO2 targets
- To encourage the use of electric vehicles in the local area
- To help advertise your car park, by choosing for it to appear on online maps and apps that publicise charging locations



# What will the post Covid-19 Expectations be from Employees?



- 29% of office workers, expecting to stay in the same or similar role, no longer want to spend any time working from the office
- UK employees are expecting a more flexible way of working once the Covid-19 restrictions are lifted
- 45% would like to change the times that they work, including their start/finish times or working their hours across fewer days

UK employees are expecting to be able to make these changes, with 59% believing their employer will allow the changes they want, and 40% prepared to change jobs if not allowed (source: representative survey of 1,500 adult UK residents undertaken by transport and research consultancy SYSTRA Ltd, between 4th-12th June 2020).

Key findings include:

- 29% of office workers never want to return to the office, instead wanting to work from home.
- Of those that commute by rail or bus, this increases to 32%.
- 37% of 5-day-a-week office workers want to return to the same pattern.
- 55% of UK workers would like to work more flexibly, including changing their start/finish times or working their hours across fewer days, compared with before Covid-19.
- 59% think it is likely their employer will let them make the changes they want to their work location or working patterns.
- 40% think it is likely they will change jobs if their employer does not allow them to make the changes they want to.

Until COVID-19 struck, offices had become central to our lives. Office workers spent around half their waking hours there, but for workers to return to offices in the near future, they need to be safe. What could the traditional office look and operate like as we emerge from the pandemic?

Although most office workers are currently working from home, it's likely that the office will return in some shape or form as the pandemic subsides.

Many workers don't have suitable homeworking environments, and others are likely to miss the collaboration opportunities the office can provide. However, employees will need to trust employers to give them a safe, healthy, practical office to return to.



# What response will the office environment need to make to satisfy this new vision?



## 1. Location

Property portfolios will be a top priority when it comes to future business strategies. An undisputable long-term concern will be to reduce occupational costs and simultaneously respond to workforce pressure to reduce commuting time. Some traditional epicentres in the city will be broken down into decentralised regional hubs, while out-of-town business parks may feel an uplift in demand, awarding workers the ability to park on-site.

## 2. Floorspace

This is a critical concern for industry leaders faced with imminent or fast-approaching lease renewals. In the short-term, whilst social distancing is at the forefront of our responsibilities. However, as time moves on, shifts in user activity and maintaining an emphasis on home working for individual work will inevitably result in offices needing less desk space. Whether this results in a reduced, or increased demand for floorspace will depend on individual business activity and cultural dynamics.

## 3. Landlord and tenant relations

Immediate lease renewals will be scrutinised with future business strategy firmly in mind. Leases may require renegotiation in order that occupiers maintain flexibility whilst their businesses and people adjust their needs in this time of great flux.

It is clear that we are facing a new era in fit out as a result of the global pandemic and potentially a parallel path towards greater landlord and tenant collaboration.

There will be industry pressure exerted on landlords to offer higher quality Category A fit outs. Larger organisations may not be willing to compromise on their aspirations

for ready-made activity-based working and wellbeing spaces.

Across the board, landlords will need to respond to demand for ‘pandemic-proofed’ and certified space, fitted out with anti-microbial materials, sophisticated ventilation systems and smart technology.

## 4. Workplace design

We will see a demise in traditional workstations as the focused to-do list will continue to be undertaken at home. This will result in an acceleration towards multi-purposed activity-based working. This reduction in demand for workstations will manifest itself in two ways; the market will be flooded with sub-lets as companies attempt to claw back rent, and others will repurpose the environment creating a more diverse menu of areas to stimulate group dynamics, encouraging agility and creativity.

Personal preferences will change when it comes to how to travel to the office and our space will need to cater for this by providing well-equipped showers and making allowances for personal care.

## 5. Office culture

Trust will be at the heart of every future high-performance culture, and must flow two ways. A higher proportion of workers will continue to work from home when they can. The journey for ‘old-school’ managers may be challenging, but they will inevitably adjust away from judging on “presenteeism”, instead measuring their people on performance, productivity and output.

Likewise, office workers must be able to trust their leadership teams to oversee their workspace, its maintenance and cleanliness. Visible proof and transparent communication will offer reassurance that duty of care is - and will continue to be - a top priority.

## 6. Wellbeing

This cultural shift will create a need for collective focus on staff mental and physical wellbeing in the new era. The companies who genuinely believe in the benefits of listening to their people, attending to their needs and delivering evidence in the workplace will find themselves in pole position. The cardinal question will be “what more can we do for our people?”

## How do I assess how energy efficient my building is?



Given that the office space will probably change for ever in terms of use and the required spaces, a focus will need to be given to the costs associated with those buildings. Energy audits will provide an in-depth assessment of the current energy usage profile of the building and recommended changes and upgrades to both accommodate the changes in configuration and the usage patterns of the building.

### A survey will normally cover:

- Energy conversion: i.e. gas to heat in a boiler; electricity to cooling in a chiller
- Energy distribution: how energy gets from one place to another
- Energy end use: the equipment and people that use the energy
- Management systems: how energy is managed and accounted for

### Recommendations are normally divided into three broad categories:

- No-cost measures – such as good housekeeping or changes in behaviour
- Low-cost measures – often not requiring capital expenditure approval
- High-cost measures – for which capital approval will be required

An energy audit is defined as a study to determine the quantity and cost of each form of energy to a site, building, process/manufacturing unit or piece of equipment over a given period – usually a year.

In many ways an energy audit is similar to a financial audit; an energy audit can be part of an energy survey.

### Do your own survey, or commission a specialist?

If your energy bills are low, you may not be able to justify the expense of a commercial energy survey. In this case it may be a good option to undertake your own survey and then look to equipment suppliers to help you in areas where you think that investment is required.

If your energy costs are higher there is still a case for conducting your own survey as it will give you an in-depth understanding of how your organisation uses energy. It also means you'll be starting from an informed position should you wish to commission a commercial survey.

For any organisation a good starting point is a walk-through inspection. This allows you to identify obvious opportunities and will help you to decide whether you need specialist support.

### When to undertake a survey

A survey is a key element in any energy management programme. Ideally you should undertake your first survey as part of the development of your energy strategy, at the beginning of your energy saving journey. This means that you'll be able to set objectives based on concrete knowledge of how energy is being used, rather than guesswork.

Practices and technology change, so you should consider undertaking a full energy survey around every five years – or more frequently if there are significant changes in operations, equipment or plant configuration, or personnel.

Alternatively you may want to introduce a rolling programme looking at different parts of the organisation in stages. An effective energy survey will establish which areas will need regular attention and review through good continuing energy management. When planning the timing of energy surveys, take account of any asset condition surveys that are planned as the two can support each other.



# What can be done to make my building more energy efficient and reflect the new working environment?



## Lighting

On average 25 per cent of an organisation's electricity costs come from lighting. Energy efficient lighting measures can reduce these costs by at least 30 per cent, and up to 60 per cent in many cases.

## Heating and Hot Water

Heating and hot water can account for as much as 60 per cent of your total energy costs. And because it's possible to reduce your heating costs by up to a third, the potential savings are substantial.

## Boilers and Heat Distribution

In a typical building, heating and industrial operations can account for as much as 60 per cent of the total energy bill. However, it's possible to cut heating costs by up to 30 per cent by implementing some simple energy saving measures.

## Ventilation

Good ventilation is essential – it provides fresh air and also helps protect your building against damp and condensation. It is also needed to remove fumes and pollution from occupied areas. By taking just a few simple measures, you can significantly reduce the energy required for ventilation while maintaining performance.

## Air Conditioning

Air conditioning can use a huge amount of energy – enough to increase a building's energy consumption and associated carbon emissions by up to 100%.

## Building Controls

Building controls can adapt a building's heating, ventilation, cooling and lighting according to changing requirements. Your organisation could significantly reduce its energy costs by simply installing controls and making sure they are set, operated and maintained correctly.

## Office Equipment

From PCs to vending machines, office equipment of some kind is used by almost all UK organisations, and accounts for around 15 per cent of all the electrical energy used in UK offices. It's an area where huge savings can be made, as effective management of equipment can reduce its energy consumption by up to 70 per cent.

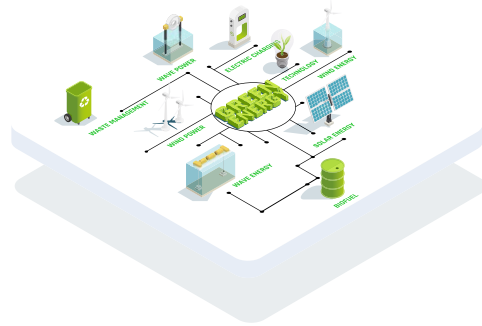
## Refrigeration

A lot of companies spend far more than they think on refrigeration, including HVAC, retail and process applications. For some retail and specialist companies, it can represent more than 50 per cent of their energy bill.

## Heat Recovery

Heat recovery is the collection and re-use of heat lost from a process or building. This can help reduce the energy consumption of the process itself, or to provide heat for other processes. Like all systems, if you have a heat recovery system in place it will need to be reviewed to make sure it's operating effectively.

## The Sustainability Lens with Bellrocks' Support



There is little doubt that the world environment is changing and we all need to respond quickly to the challenges that lay ahead to save it from a point of no return.

It is all too easy, in the hectic societies we live, to lose our way and live in the hope that 'things will sort themselves out'.

Those things will only change by a refocussing of our priorities and embracing the change that has to occur.

Looking through the sustainability lens, it can no longer be denied that businesses have a vital role to play in reducing carbon emissions, both at the office and supporting green transport initiatives.

Bellrock have the expertise and experience to help you through that journey by:

- Reviewing your existing building stock in terms of energy usage.
- Suggest and manage responses to that review.
- As systems become redundant or are at their end of life, help with forward planning of preventative maintenance regimes to ensure that green options are built into the decision making
- Support with the re-imagining of the workplace in the post Covid times by reviewing office usage, heating, lighting requirements and IT etc.

- Help ensure that your workplace is geared towards the green transport initiatives, such as cycle to work schemes by help with intruding e-bike cycle spaces as well e-vehicle charging bays etc.

Covid-19 has certainly focussed that lens and the opportunity needs to be embraced to make a change that will benefit of all and ensure we leave a planet for our children and grand-children to grow and prosper on.



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