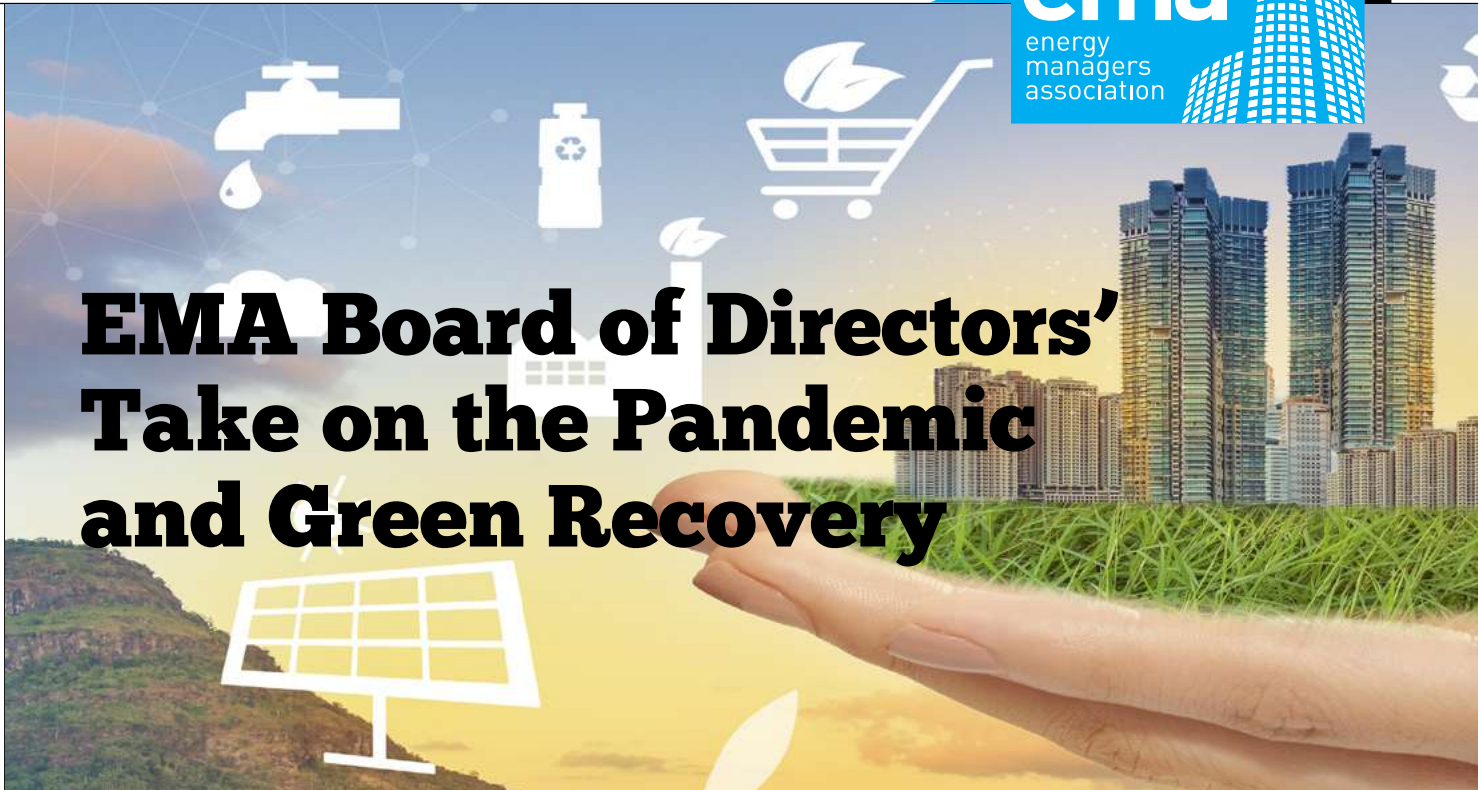


by Scott Armstrong, Gillian Brown, Martin Gannon, Caroline Holman and Ben Burggraaf



# EMA Board of Directors' Take on the Pandemic and Green Recovery

**In January, we asked the EMA Board of Directors for their opinion on the highs and lows of being an energy manager. Little did we know then that six months later all organisations' focus on energy efficiency, sustainability and climate change would have changed so dramatically and that the challenges and opportunities experienced by the energy management industry would be so different.**

The EMA *'Energy Management & Covid-19: easing of the lockdown'* survey shows that everyone has been affected in some way but the extent varies widely. There is no doubt that the recovery will be long and will require making difficult decisions in many organisations. What the lockdown taught us is that sharing the challenges and experiences is more important than ever and we will continue reaching out to our membership in the coming months to share their experiences. In this issue, the members of

the EMA Board of Directors offer their thoughts, observations and tips.

**Scott Armstrong, Group Head of Energy and Sustainability at Bourne Leisure**

**Energy Management During the Covid-19 Pandemic – The Value that we Deliver**



Firstly, I would like to express my deepest sympathies to all families who have lost a loved one during the Covid-19 pandemic. If you are one of those affected, my thoughts are with you at this difficult time.

“ **WHAT IT HAS PROVED TO ME IS THAT THERE IS AN IMPORTANT PLACE IN BUSINESS FOR ENERGY MANAGEMENT, WHETHER IN A CRISIS LIKE WE ARE CURRENTLY EXPERIENCING OR IN NORMAL OPERATIONS.** ”

The catastrophic impact of the Covid-19 pandemic on businesses across the globe has shocked us all. In the pre-Covid days, there was no business disaster scenario planning that would have gone as far as the reality has taken us.

Bourne Leisure are a hospitality company, we offer coastal holiday facilities to 25,000 holiday home owners and over 5 million guests a year at our Butlin's, Haven and Warner brands. As a hospitality business we have been one of the worst hit sectors in the UK economy. We closed all our sites to owners and guests on Friday 20th March and at the time of writing, we are preparing to re-open on a model supporting social distancing and compliance with new government standards on Covid-19 safe working.

In early March, I was asked to sit on a newly formed Covid-19 Steering Group, offering guidance to our Exec Board on the unfolding crisis, compliance with fast changing government policy and establishing protocols for our business in a number of operational areas. Of the many areas of



been, through this difficult period.

We are now at the end of the 16th week of close-down, we have surpassed the utility savings target we had set ourselves and we have strengthened our relationships within our business and with our supply chain. I count that as a huge success in what has been the most challenging time that our business has experienced and that the UK has ever had outside of war times. It has not been pretty at times and I am now faced with an exhausted team whose well-being is going to be important to manage in future months. What it has proved to me is that there is an important place in business for energy management, whether in a crisis like we are currently experiencing or in normal operations. We have proved our worth and that gives me great confidence for our profession into the future.

We are now looking forward to welcoming our owners and guests back to our sites to provide them with a safe and relaxing much needed summer holiday. The lessons we have learnt and the support we have provided will continue as we adapt to the new way of working. The focus remains firmly on the efficient use of energy and water and the hard work continues to model and report on what good looks like in the new normal.

**Gillian Brown, Energy Manager at University of Glasgow**

**Making our BeMS Work in the New Normal**



As energy management professionals we are all very aware of the value of Building Management Systems (BeMS) and the benefits they provide when managing equipment within a building portfolio. Many weeks ago, we left buildings not

“ **THESE IDEAS ARE ALL THINGS AS ENERGY MANAGEMENT PROFESSIONALS WE KNOW, BUT SOMETIMES IN THE MIDST OF HUGE CHANGE IT'S THE SIMPLE IDEAS WHICH PASS US BY.** ”

To support our environmental commitments and shift the focus away from pure cost control, we also took time during the close-down to launch our membership of The Planet Mark and virtually celebrate World Environment Day with our team and through our brand social media channels.

What was also important was to adopt an open communication line with each of our utility suppliers and our TPI ensuring regular catch ups, the re-forecasting of volumes, arranging sell-backs, marking sites as vacant from a water supply perspective and updating them with re-opening plans so that they could, in the case of our LPG supplier, un-furlough team to support our re-opening. This proved to be invaluable and I will not forget the support that all of our suppliers have

focus, what was apparent at that point was that cost control was going to be key in the event that our operations closed. I therefore had some early opportunity to focus on the impact on our energy and water contracts, the support we could provide to the brands in terms of efficient close down and how to support the re-modelling of our cost base in a close down scenario.

When the decision to close our operations came, my team were not furloughed, reflecting the importance of their impact on cost control and the focus that they could give to the remaining few teams at each of our operational sites. We had modelled a budget reduction of £6m of utility savings across a notional 16-week closure. This was supported by daily analysis provided at sub-meter level, the creation of league tables to support the competitive nature of our team, MS Teams calls with brand sites where knowledge sharing was encouraged and support from the Executive Team to give greater focus.

knowing when we would return, and now, as our working patterns changed for the foreseeable future, it is more important than ever that the management of mechanical and electrical equipment within buildings is able to be undertaken remotely and with an enhanced level of granularity and accuracy.

As we begin to bring people back into office spaces and instigate social distancing measures, the numbers of people utilising one space will dramatically reduce. The impact this will have on temperature regulation is still to be determined, but if we consider the heat load provided by people, equipment and IT services for example, the volume of heat and coolth within a building space is now likely to change. In addition, the relative energy and carbon emissions will also change. With changes to shift patterns and buildings now potentially opening for longer periods of time, plant will have to run longer and potentially at a different rate to accommodate air circulation, temperature regulation and CO2 levels.

To enable these changes, our BeMS systems will have a significant role to play. For buildings which are new or have had BeMS refurbishments in recent times, it is more likely that these systems will be able to control specific spaces to an appropriate operating condition, thus removing the necessity to condition a whole building for a much-reduced number of people. However, many BeMS installations may not have been touched for a number of years and therefore can only control heating and cooling systems within a building at a much less granular level.

Until more clarity is determined for any permanent changes, there are a number of simple no and low-cost checks which can be carried out on the BeMS to ensure it is working as efficiently as is possible in the current situation.

Some things to consider could be:

- Are all set points in the same location correct or can these possibly be reduced or increased

depending on heating and cooling parameters?

- Would CO2 instead of temperature regulation be acceptable if there are reduced numbers of people working in a space?
- Will buildings hold temperature using the thermal properties instead of plant extensions?
- Can plant, which would otherwise be left on, be controlled using time clocks or reduced operating hours?
- Can offsetting be used to adjust parameters in the background?
- Who is controlling the system, is it done remotely and with the correct alarm notifications?

These ideas are all things as energy management professionals we know, but sometimes in the midst of huge change it's the simple ideas which pass us by. We should take this opportunity to really assess the value our BeMS provides. If it doesn't provide the level of granular control currently this can be built in moving forward. The key here is to recognise the change and what we need our BeMS to do as we move into this new operating normal.

### Martin Gannon, Energy Optimisation Manager at Liberty Speciality Steels

#### Organisations Need to Navigate and Adapt to a New Normal



I have spent the past thirty-nine

“ WE MUST CONTINUE TO FOCUS AND LOOK FOR NOVEL SOLUTIONS TO TODAY'S CHALLENGES OF DECARBONISATION. ”

years working in the Steel Industry, in various Engineering roles across production areas, primary melting,

rolling/finishing and service departments including, high voltage, electrical services/workshops, and project development.

Throughout this time, efficiency savings have continued to be driven by energy costs and price disparity, policy, Steel Sector Climate Change Agreements, EU Emissions Trading scheme participation, ESOS and more latterly the new SECR requirements, and the drive for carbon neutrality and Net Zero.

As the costs of technology is coming down, the overall cost of sustainability is reducing with wind, solar and renewables now cheaper than fossil fuels, however the decarbonisation of large-scale industrial heat is complex and expensive. The ongoing work across the industrial clusters and further afield looking at potential Hydrogen solutions is however showing promise. Potential barriers to this are the large initial capital requirements and ongoing costs compared to Natural Gas. To get project funding businesses may need to be able to prove a return on investment up front, which can be a challenge when many measures have much longer-term return rates, some of the recently announced Government funding opportunities may go some way to help with this.

Over the years, I have seen first-hand that the Steel Industry is good at adapting to the challenge of change. However, the level of disruption caused by Brexit uncertainty and the ongoing Covid-19 pandemic is unlike any other experienced.

New working practices have had to be quickly developed and adopted, working remotely where possible, Teams Meetings and virtual audits have become the new normal, risk assessed social distancing in plants has had to be widely implemented to enable safe continued production operations. Plant and equipment have had to be operated at lower than 'Design Levels' leading to underutilisation and less efficient operations.

These challenges have raised questions, “Can we plan better?” “Do we need to run that piece of plant?” looking at production flows, product mix, capacities, and plant capability to optimise performance at the current levels, standing certain plant, to maximise throughput and efficiency through others.

As we make plans for a post-pandemic economy, we have challenged ourselves to think differently across our product mix, assets and cost base to improve competitiveness and prepare for a new future. As the UK Grid becomes ‘greener’ with the ongoing implementation and adoption of wind, solar and other renewables, the GREENSTEEL vision, producing high grade steels by utilising the abundance of steel scrap in the UK through high efficiency Electric Arc Furnaces, is a way to significantly reduce the carbon emissions from steel making compared to that of the traditional Blast Furnace/Basic Oxygen Furnace route. Also, looking at developing and expanding the product portfolio, moving into new UK markets, which are currently net importers of steel products, is a way to further maximise plant output and again increasing efficiencies. We must continue to focus and look for novel solutions to today’s challenges of decarbonisation.

“Your People are your biggest asset”, I have found over the years that you need to involve and empower people in the business to be able to drive energy savings or efficiency improvements through. Without the involvement of the local teams, the efficiency savings will fall off over time or will not even be realised in the first instance. Listen to ideas and feed back to all suggestions, even if the idea is a non-starter. Involve the local teams in the discussion/ brainstorm for ideas. Once you spark the interest, the ideas will flood through, these guys know how their plant operates and often come up with the most suitable suggestions, maintaining the momentum is key.

**Caroline Holman, Energy Lead - Strategic Engagement & Policy at The Institution of Engineering and Technology**

**Road to Net Zero for Energy Managers and Lessons Learnt from Covid-19**



Despite the very immediate and still present danger of this pandemic; energy managers are one of the groups which have seen some upsides in terms of energy consumption and carbon emissions reduction. However, as the lockdown eases and society attempts to find a ‘new normal’; how do energy managers maintain and accelerate the benefits realised during this period?

“ **THE NEW PLAYER IN TOWN MUST BE A ‘RISK BASED’ RATHER THAN ‘COMPLIANCE BASED’ STRATEGY.** ”

Firstly, they must continue to promote and leverage energy efficiency – it is not a one hit wonder and will continue to be at the heart of the recovery and the transition to Net Zero. We know that necessity and survival are at the core of the behavioural changes observed during lockdown; including reduced travel, increased remote working and an upsurge in the use of digital and virtual communications. The next phase must bring these lessons to the forefront of planning and work schedules including furloughed and home-based colleagues returning to the workplace.

Now is the time to capture all the data and evidence and engage your new best friend! Have I not mentioned this person or team? – Human Resources; this is the department which could and

should be an ally in promoting the mental and physical health benefits of sustainable travel plans, home working, better work life balance and, efficient and healthy buildings. Don’t dump your colleagues in Finance they are still key to unlocking investment when it is required; but are less likely to significantly influence behavioural change beyond their own boundaries of responsibility.

In these challenging times, where cash is even more constrained than pre COVID-19; engagement and influence, leading to robust and sustainable changes in energy consumers’ behaviour will be a fundamental and critical platform for overall efficiency and Net Zero programs. It is interesting to note that in the ‘Committee on Climate Change progress report to Parliament 2020 on 25th June the report stated, ‘Six principles for a resilient recovery’;

No2 on this list was ‘Lead a shift towards positive long-term behaviours’.

As with any transformation, whether short, medium or longer term; pragmatism and a recognition that there is no single solution to the challenges we all face, are key. Energy managers must embrace this and

look for overall efficiency and potentially hybrid systems solutions; new / emerging and established technologies and practices.

This is not just about what is affordable but also recognising that in many cases small transitional steps can lessen the impact of ‘unknowns’, change and learning. These smaller and interim, but still impactful steps will gain momentum and will reduce the need for, and quantity of larger ticket items over time. It is also likely that a better understanding of performance and scalability will be achieved.

Finally, the new player in town must be a ‘Risk based’ rather than ‘Compliance based’ strategy. By understanding the level of risk and risk appetite of the business; the co-benefits (resilience, security of

<sup>1</sup> <https://www.theccc.org.uk/comingup/progress-report-to-parliament-2020/>

supply, impact on Net Zero goals etc) are more likely to be captured; enhancing the business case and getting projects over the line. This is crucial on the transformational journey to Net Zero; where policy, investment, technology and solutions are not necessarily in the immediate line of sight. Dependence only on the 'historical lens'; including resorting to and relying on 'what we already know' may inhibit success in long term and increase the costs, disruption and risk in the coming decades.

### Ben Burggraaf, Head of Energy Optimisation at Welsh Water

#### Pole Position in the Race to Zero – Get Ready for the Green Recovery



There seems to be a broad public support for a Green Recovery from the economic crisis following the COVID-19 outbreak across the world and many organisations and businesses have urged the UK Government to place decarbonisation at the heart of the recovery efforts. This drive for a Green Recovery is supported by the Race to Zero campaign, which the UK Government launched on the 5th June 2020, in readiness for the COP26 in Glasgow, which has been moved to November 2021.

As a result, BEIS has been engaging with companies and trade bodies on how best to support businesses and organisations to accelerate the transition to Net Zero. One of these new support measures is the Industrial Energy Transformation Fund, which is a £315 million fund intended to support businesses with high energy use to transition to a low carbon future. This fund replaces the Enhanced Capital Allowances scheme, which many organisations have used in the past, to improve the business case for procuring energy efficient equipment.

Although the UK Government have not announced any details on

“ THERE SEEMS TO BE A BROAD PUBLIC SUPPORT FOR A GREEN RECOVERY FROM THE ECONOMIC CRISIS FOLLOWING THE COVID-19 OUTBREAK ACROSS THE WORLD ”

support measures to stimulate the Green Recovery, BEIS have however defined five focus areas, which 'need particular attention'. These areas are transition to green energy, clean transport, nature-based solutions, adaptation and resilience against climate change and finance.

In anticipation of any potential new or additional support measures, this renewed interest in energy efficiency, provides energy managers with a great opportunity to 'dust-off' the Energy Savings Opportunity Scheme (ESOS) assessment and/or audit reports, to generate a current list of energy savings opportunities that aid the organisations that we serve, to accelerate the Race to Zero and become more sustainable.

Particular areas of interest will be projects that:

- **Improve the overall energy efficiency of the organisation**

These projects are the 'bread and butter' for the energy managers and the best way to avoid energy costs or reduce carbon emissions, is not use it in the first place. Many of the 'low-hanging fruit' have already been picked, but energy efficiency schemes with longer paybacks, could become more attractive by organisations if supported by UK Government.

- **Minimise or even eliminate the need for commuting and/or business travel**

The Covid-19 outbreak has forced many organisations to continue to serve their customers, whilst their employees fully or partially work from home. To facilitate this, they have accelerated the roll-out of new technologies to facilitate this transition. Many employees

have experienced working from home as being positive and hence companies are planning to continue to work similarly in this way, even when restrictions are being lifted.

- **Reduce the emissions of fleet transport**

The lockdown and associated travel restrictions significantly improved the air quality in many areas across the UK and seen emissions drop globally by 17% in April, of which half was attributed to a reduction in transport. An accelerated move to a green or low carbon fleet, powered by electricity or even hydrogen, is way to sustain these lower levels of emissions in the UK, once the country comes out of the lockdown.

- **Installation of behind the meter renewable generation**

The continued drop in solar panel prices in recent years, has meant that subsidy-free solar is commercially viable at scale, in particular if the generated power is consumed behind the meter. If the drop in panel prices and associated equipment, continues to fall, even smaller scale solar is viable without Feed-In Tariff support.

Having a list of projects ready for your own organisation or for your customers (if you are an external consultant), will prepare you well for the surge of attention and information that can be expected once any new measures are announced by the UK Government and put the organisations that you serve in pole-position to benefit from these measures and become more sustainable.