The energy conscious organisation

Changing behaviour is a sometimes forgotten, but highly effective, part of the energy management armory. This article from ESTA's *Jes Rutter* describes the enormous potential and delivers a call to action.

The new ESTA initiative: Energy Conscious Organisation, in partnership with the Energy Institute, has a compelling motive: there is an urgent need for climate action to meet both IPCC 2030 targets and the UK's longer-term net zero 2050 target. A significant part of the solution for UK government and end user organisations is the – currently largely ignored – focus on behaviour change.

Evidence suggests that behaviour change offers around 50% of the total potential energy savings available. The other 50% comes from technology, though this typically represents 99% of the resource input and policy attention from organisations and government. A shift is required, and soon, to ensure that the 'hidden' savings available from behaviour change are realised.

The overarching aim of energy behaviour change is to deliver 'non-consumption'. This is the most important first element in the 'energy hierarchy' of 'Lean to Clean to Green' as it avoids energy being used in the first place. Our ambition is to excite people to challenge the norm, and to encourage mass adoption of energy efficiency good practice through more energy efficient behaviour.

This means going far beyond the obvious measures such as turning off, setting conditions at the right level/time and identifying simple low-cost energy improvement projects, by challenging and changing senior management decision making, standards, policies, processes and plans.

Behaviour change is also about the interface of people with technology. The optimisation of technology needs to happen both at commissioning and on an ongoing basis. Organisations adopting such approaches will not only save significant amounts of energy but, in turn, will also help optimise consumption for individuals in their homes and communities. They are also likely to identify other sustainability and productivity benefits throughout the organisation.

Behaviour change is about the interface between people and technology
Photo: ESTA

Since so little has been done in this arena to date, the potential energy savings are significant. Furthermore, previous experience shows that behaviour change projects require relatively low investment, even including the cost of internal resources. One major difference is that unlike technical projects, the savings are not delivered overnight but instead typically take four to twelve months to be fully adopted and for savings to be measurable. This requires different expectations, as well as ongoing resource input (however low-level) to maintain and improve energy saving opportunities.

The methodology and approach for delivering behaviour change programmes exists, although not as one single holistic, robust, best practice approach. A good practice approach is now being defined by ESTA with the aim of sharing this as part of the Energy Conscious Organisation project. This includes deliverables such as a behaviour change gap analysis and a framework for building a business case. Ultimately this may also lead to a future standard.

So, what are the common traits for success? Ways that an Energy Conscious Organisation can minimise its use of fuel and electricity are shown in **Table 1**.

Training providers

There is currently a lack of capacity for delivering widespread behaviour change; the number of skilled practitioners is not on the scale that will be needed to meet the goals and objectives of this programme's vision.

An accredited scheme for training providers (just one element of behaviour change) already exists through ESTA and a number of organisations are currently accredited. Behaviour change training courses are available through ESTA, the EI and other organisations. We hope that the potential of energy behaviour change programmes will be recognised by organisations, and government, who can in turn help to set an agenda and direction that will enable growth in this area, the outcome of which would be to deliver against the savings benefits of our vision.

Two of the main challenges for energy behaviour change projects are implementation (part of which is down to skilled providers) and perception. Behaviour change projects are not widely recognised

Engage and involve everyone appropriately to their function and potential opportunities
Encourage vigilance, facilitating resolution of challenges and exploiting opportunities
Develop individuals' skills and knowledge as needed
Measuring, monitoring and reporting the results
Adapt its policies and processes to guarantee continual improvement

Table 1. How an Energy Conscious Organisation can minimise its energy use

as making a significant contribution to energy savings. This is in part because implementation of behaviour change projects in end-user organisations tends to be occasional, partial and without a long-term structured approach. This lack of holistic implementation also leads to less-than-optimal improvements, degrading confidence in behaviour change projects.

Proven case studies

This cycle presents a challenge when trying to encourage take up of behaviour change programmes. Even so, there are case studies that clearly demonstrate significant energy savings as a result of these programmes, some of them measured using the International Performance Measurement and Verification Protocol (IPMVP).

One of the goals of this initiative is, for the first time, to collect such evidence on specific projects into a single evidence base. ESTA is asking organisations to contribute case studies, however small, to be hosted on its dedicated web page. This goal is of critical importance as there are not currently enough case studies for decision makers to evaluate and recognise the significant contribution that behaviour change projects can make.

The vision of the ESTA Behaviour Change Group is that, at a minimum, Energy Conscious Organisations will generate 10% of energy reduction savings through behaviour change by 2030, ie deliver at least 50% of the UK's clean growth 20% target for energy efficiency.

The overarching aim of energy behaviour change is to deliver 'non-consumption' – the most important first element in the 'energy hierarchy' of 'Lean to Clean to Green' as it avoids energy being used in the first place

In the medium to long term this target can be exceeded by organisations embracing a more structured, code of practice-driven approach to behaviour change. Hitherto, even the IPMVP proven case studies (which have demonstrated around 10% savings across an organisation) only covered at most a quarter of the potential areas for behaviour change improvements. A holistic approach would have the benefits of joining up all of the elements into one cohesive behaviour change initiative – there are many examples where up to 50% savings have been achieved from a systematic review of an organisation.

To enable change to take place at a faster rate, the initial Energy Conscious Organisation vision includes delivering 50 to 100 proven case studies using IPMVP in the next three years. This requires 10 to 20 pilot projects in the short to medium term. Any organisation interested in being involved is asked to contact ESTA and/or to attend the forthcoming ESTA Conference on 17 October in London, which will major on behaviour change.

The benefits of delivering 100 proven case studies for medium to large energy users, using IPMVP methodologies, is conservatively estimated to be £12.5mn per year with an investment of £9.5mn. The larger benefits, once this approach becomes mainstream, is estimated to be at least one hundred times this.

The key opportunities of delivering local, relatively quick, low-cost energy savings through behaviour change have been consistently demonstrated for the organisations involved. In addition, there is significant added value to be achieved if 'non-consumption' is delivered at scale, such as the requirement for less infrastructure at national and local scale. This also presents a significant opportunity for UK plc to be seen as global leaders in behaviour change and for the export of skills and know-how.

Jes Rutter is the Chair of the ESTA Independent Energy Consultants Group and Managing Director of JRP Solutions.

If you work within an energy end-user organisation, we are looking for your interest and participation. Please get in touch via **info@estaenergy.org.uk**