



“Energy in Buildings and Industry and the Energy Institute are delighted to have teamed up to bring you this Continuing Professional Development initiative”

MARK THROWER MANAGING EDITOR



SERIES 18 | MODULE 09 | BEHAVIOUR CHANGE

# Plan for behaviour change

by James Brittain, John Mulholland and Jes Rutter, Approved EnCO Practitioners

Leonard Bernstein, the well-known American composer, once said: “To achieve great things, two things are needed: a plan and not quite enough time”.

The time organisations have to accelerate towards Net Zero is shrinking. As part of this, there are increasing pressures on energy users from employees, customers, shareholders, regulators, and other interested parties to significantly improve levels of energy efficiency throughout their operations and processes.

Evidence suggests that behaviour change offers around 50 per cent of the total potential energy savings available. The other 50 per cent comes from technology and yet, as important as it is, technology typically gets 95 per cent of the focus. A better balance is required to ensure that the hidden and largely untapped savings available from behaviour change are realised.

Behaviour change is considered in its broadest sense, targeting attitudes, behaviours and decisions implemented by those who influence energy performance as well as those who have direct hands-on control of equipment and systems. Getting behaviours right also enhances and protects the legacy benefits of technology investments as they rely on sociotechnical systems for success.

Energy Conscious Organisation (EnCO) is a framework developed by Energy Services & Technology Association and the Energy Institute to help incorporate people measures into energy management strategies and plans.

The vision is to excite and equip enough colleagues to challenge the norm and to encourage widespread adoption of energy efficiency good practices throughout the organisation.

At the heart of the EnCO framework is the EnCO Matrix.



This can be used to review the effectiveness of approach across five key pillars: engagement, alertness, skills, recognition and adaption (EASRA).

The matrix is based on the concept of ‘congruence’ to facilitate balance across the five pillars so behaviour change interventions support and reinforce each other holistically.

A visual profile is made by marking points across the grid for each pillar against the improving scale of achievement. The shape of the profile then demonstrates how strategies can be better balanced and improved in delivering outcomes.

Fig. 1 (see page 18) shows the EnCO matrix with an example ‘jagged’ profile.

Learning objectives include:

- consider the imperatives for change;
- describe how to highlight reality;
- explain key features of a balanced approach; and
- create a plan that propels momentum.

A useful feature of the Matrix is that it facilitates conversations with colleagues about current levels of energy performance, opportunities and challenges. One helpful way to do this is to focus on capabilities, opportunities and motivations to

change behaviour (COM-B).

The matrix is sufficiently simple that any organisation can adapt the wording to better suit their goals, culture and operations.

The imperative for change, of course, is not driven by Net Zero targets alone but also needs to take into account and balance other stakeholder needs and expectations such as better customer service, cutting costs and enhancing reputation.

You could ask three questions:

- if we are to achieve Net Zero, where on the Matrix do you need to be? (B)
- where are we now? (A)
- how do we get from A to B?

In practice, there can be significant differences in observations described by a target audience, particularly from those with differing roles and perspectives. A constructive use of the matrix is to take the differing views, discuss why they are different and use this discussion to form a consensus reality position on the EnCO Matrix. This will give agreement on ‘where are we now?’

The EnCO profile and score, often along with anecdotal observations, forms a benchmark to measure future progress against.

A Balanced High EnCO profile across all pillars is associated with

a mature energy management programme that accelerates progress towards sustainable Net Zero goals.

Low scores across some or all pillars are indicative of significant opportunities to improve an approach.

A strategic gap analysis is therefore used to compare the 'desired' position (often targeting three to five years ahead) with the current profile, to feed into the development for the catalyst for change.

To bridge the gap, change makers need to understand what motivates the people involved on a personal level. People's actions are often driven by emotive connections that come about from connecting with colleagues, having fun, a better workplace, better skills, achievement, recognition and reward. A successful catalyst often includes targeted co-benefits resulting in a 'win-win'.

The business case is set up by focusing on the key strategic activities which make the biggest difference in delivering the required goals. This should address the organisation's readiness to deliver change (available resources, knowledge etc), key barriers (capabilities, attitudes etc) and its ability to sustain change.

To develop a good plan, focus on overcoming any deficiencies across the EASRA pillars, rather than specifically following a framework.

Figure 2 shows the variety of different possible Matrix profiles.

**1) 'Balanced Low'**

Profile 1 is uniformly low across all pillars. This is often underpinned by low overall engagement. Energy performance, for example, may have been marginalised because it has been overly delegated to a specialist, service partner or aM&T system.

Having top managers on board is essential. They need to demonstrate their commitment by defining a compelling vision, providing the resources needed and taking interest in progress made.

There also needs to be a strategy to engage Significant Energy Users (SEUs), those who can impact on or influence significant energy use. This includes HR, procurement and development colleagues as

**Fig. 1. The EnCO Matrix with a 'Jagged' profile**

	0	1	2	3	4
<b>Engagement</b>	Very little or no engagement at any level on energy management in the organisation. Top management not engaged other than authorising payment of energy invoices.	Some level of engagement by top management with a policy and overall energy reduction goals set and specific roles/responsibilities delegated to key practitioners and significant users. Minor levels of engagement elsewhere.	Medium level of engagement at some levels and growing levels of engagement among colleagues on the issue and the need to take action, coming about from a shared vision communicated across the organisation.	Specific reduction targets set by top management, delegated for action by practitioners/significant users/others who reflect good team working in a co-ordinated way towards a common goal. Most colleagues understand the importance of and actively looking for ways to save energy.	Very high levels of engagement at every level of organisation on energy management including top management practices, significant users and all colleagues. All levels enthused and taking positive action.
<b>Alertness</b>	Little alertness/awareness at any level in the organisation to save energy and no mechanisms in place to alert people of energy waste when it occurs.	Top management have allocated resources and processes in place to alert practitioners and significant users of opportunities (use of energy data, observation).	Practitioners and significant users prioritise and action identified opportunities reactively, and proactively seek new opportunities and apply preventative measures (e.g. maintenance).	Increased alertness evidenced by top managers, practitioners and significant users on how energy management integrates and positively impacts other key areas (co-benefits, lifecycle, business objectives, improved working practices/environments, health/safety, environmental objectives).	High levels of alertness/awareness across organisation to eliminate energy waste, mechanisms to register waste with clear responsibilities delegated and practical responses regularly actioned.
<b>Skills</b>	Few or no skills in energy management at any level of the organisation.	Top management have sufficient skills and competency, and enabled to set policy and prioritise energy management activities. Skills gap analysis conducted for practitioners and significant users and plan in place to close identified gaps.	Skills in place for practitioners in energy management to address all core energy management functions.	Significant users skilled to address energy issues competently in their areas of responsibility and working constructively with top management and practitioners.	Top management, practitioners and significant users fully skilled in their energy management roles. Commitment to continual learning and up-skilling by ongoing investment in education, competency and training.
<b>Recognition</b>	No recognition of the benefits of energy management, savings achieved or those making savings.	Data systems in place with capacity to recognise savings achieved against targets but not widely known, as seen as a technical function. Some informed recognition of those making savings.	Practitioners and significant users recognise where savings can be made, how to make them and are implementing an action plan. Increasing levels of recognition of those making savings.	Growing evidence of increased recognition of energy management at most levels of the organisation supported by data to identify where savings are being achieved. A system in place to formally recognise those making savings.	The benefits and co-benefits of energy management are widely recognised and data systems track savings against robust energy targets. Those making savings are routinely recognised and celebrated.
<b>Adaption</b>	No energy policies or procedures in place and no mechanisms in place to adapt to change.	Change can be viewed as a threat rather than a positive challenge and opportunity.	Mechanisms are in place to understand how changing business needs can impact energy use but data systems lack sufficient granularity to adapt fast enough to make effective decisions.	Energy policies and procedures continually under review and development to allow greater flexibility and allow an optimum response and momentum.	The organisation positively expects and embraces change, adapting and responding to minimise risk and maximise opportunities in a timely way to maintain continual improvement in energy management.

well as building users, facilities and operational teams. Don't forget consultants, suppliers and contractors.

All Energy Users (AEUs) also need to understand the energy policies in place, the benefits of improved energy performance and their roles and responsibilities.

The overall plan and channels used should achieve engagement and also momentum for a balanced approach.

A high profile launch event can create a good splash to raise awareness but has little momentum. Digital or print communications also

often have limited shelf-life. Training, performance appraisals, incentives and suggestion schemes are all examples of channels that offer more momentum.

**2) 'Unbalanced'**

A profile highly developed in Engagement and Adaption but which lags in other areas operates in a positive atmosphere but lacks substance.

Colleagues being alert to avoidable energy waste, before investing in clean and green technologies, is a fundamental principle of the energy hierarchy.

AEUs need to be alert to the impact of their activities on energy performance. An SEU may negatively impact on overall performance, due to increased energy use, when making operational decisions for seemingly good reasons.

Command and control approaches with too many organisational procedures can reduce alertness. Nudge, prod or persuasion techniques are generally more effective; sharing energy consumption profiles, for example, can help highlight opportunities.

Critical mass theory implies that we need at least 2-5 per cent of colleagues taking simple actions

every day to reach a tipping point of energy consciousness for lasting change. For an organisation of 4,000 people, this means involving at least 80 SEUs.

Energy champions can influence others by example. A network of volunteers can promote energy saving values and connect colleagues together. To be effective, they need to be carefully recruited, trained and supported.

For a balanced approach, colleagues need to be highly motivated and highly aware. Asking people to rate their awareness and motivation levels can be a useful way to track levels of alertness while getting them to think more about opportunities and getting new champions on board.

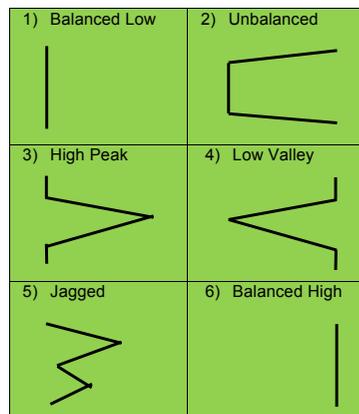
**3) 'High Peak'**

Profile 3 is highly developed in one pillar only. This could be any element and is most commonly related to the style or strengths of the manager leading the programme.

As well as motivation and opportunity, people need to have the capability to deliver change. Teams need to have a balance in skills to implement an integrated approach, highly developed across all pillars.

Training is often a key strategic

**Fig. 2 The variety of different possible Matrix profiles**



activity that helps raise the other pillars simultaneously. A training strategy should be driven by a training needs analysis, mapped across the key audiences. Colleagues need to know what they are expected to do and be competent so actions are quick, easy and intuitive for those involved.

The whole team has a key role to communicate the vision and to lead by example. It is important to be able to communicate well with colleagues to gain and build trust. Collaborative workshops and events are effective ways to bring people and teams together to develop alertness, desire and capability and trial solutions at the same time.

HR colleagues are often essential key connector champions for continual learning and up-skilling.

#### 4) Low Valley

Highly developed in all but one pillar highlights the need to develop this one aspect to fully benefit from the other activities.

This could be any element but quite often what's lacking is recognition. Robust data systems are needed to track savings against baselines and targets. Ideally, this should disaggregate interventions for detailed evaluation. Longer-term monitoring and targeting is essential because impacts can dissipate over time, but this doesn't have to be complex.

Full adherence with the International Performance Measurement and Verification Protocol (IPMVP) is desirable but is not always practical; it is the most widely used protocol for quantifying results from investments.

A measurement and verification (M&V) plan should be agreed prior to the programme. Involving stakeholders to develop the methodology ensures it's owned by the people involved. Methods to adjust baselines for both routine (e.g. weather) and non-routine adjustments (e.g. changes in floor area) should be considered.

A balance of measures is also required to sustain and propel momentum. At high level, energy performance can be measured in absolute terms at whole-facility level. This verifies total savings but, as this is a lagging (output) measure, this

can't influence momentum.

Indicative measures are used to explain why performance has changed. System energy productivity or utilisation intensity measures require investment in sub-metering and a sufficient run-up period to calibrate baseline models.

Leading (input) indicators offer an opportunity to control momentum but do not guarantee success; it can be difficult to define which measures are best. Scorecards can track observed behaviours and team actions against targets. The repertoire would be specific to the organisation, site or team.

Dashboards, balanced scorecards or crediting systems can be used to help facilitate quicker and better decisions, incentivisation and celebrating success. Do not rely too heavily on incentivisation as there's a risk of reversal if the incentive is taken away.

Focus on a simple strategic set of concise measures for which everyone understands how they contribute to strategic goals. Beware of data overload, data rich and information poor (DRIP syndrome).

#### 5) 'Jagged'

A mix of some developed pillars with others not so developed is likely to be typical for most organisations. An uneven profile highlights the weaknesses that can undermine the strengths.

Organisations need to be able to continually adapt to plug the gaps and respond to minimise risk and maximise opportunities in a timely way to sustain and propel momentum.

The energy landscape is continually changing and this is becoming more dynamic as the pressures to improve energy performance increase.

Surveillance controls monitor changes in stakeholder requirements as well as internal factors and external threats. Continually check that goals are still realistic and achievable, now and in the future.

A good plan needs to be agile focused on the key strategic activities, with a clear line of sight to the strategic objectives.

Adaptations are about continually increasing the means and reducing barriers to increase capability,

opportunity or motivation.

ISO 50001 is the energy management system standard that helps target the key activities. As well as energy policies, processes and action plans, the standard focuses on operational controls and design procurement standards to sustain behaviours. Energy and management reviews, objectives and targets and strategic controls are used to self-propel momentum.

General George C Marshall, famous for his World War 2 planning and his plan to rebuild Europe, said: "The one great element in continuing the success of an offensive is maintaining the momentum."

#### 6) 'Balanced High'

Highly developed across all pillars generally at levels 3 or 4 is indicative of the well balance and mature approach of an EnCO.

EnCOs are more sustainable, cost effective and collaborative. The business case for interventions to get to the EnCO level comes from defining and questioning reality by asking the right questions at the right time, and the EASRA framework can facilitate this process.

Is everyone engaged in the right way? Are all teams alert to the energy opportunities? Do they have the right skills to exploit them? Are you recognising, measuring and reporting results? Do you need to adapt your policies/ processes to drive continual improvement? What's next to guarantee momentum?

There needs to be a compelling vision and clear balanced plan in place with the sense of urgency. Align big ideas with strategy in a way that will excite decision makers and colleagues alike.

There also needs to be a strong team in place, with clear roles and responsibilities. Remember people often don't like change. Don't expect results too quickly - it may take time.

Don't overcomplicate it, keep it simple. Aim to balance quick wins with longer-term actions. Pareto's 80/20 principle encourages us to target the 20 per cent of the scope that yields 80 per cent of the results.

Overall, the plan will depend on the organisation; there's no silver bullet, every organisation is different. The focus often should be on blending people and technical solutions, with

targeted organisational strategic controls alongside.

Tactical techniques support strategic activities and there are many to choose from; EnCO defines over 140 different interventions. Organisations will need their own unique combination to deliver change for themselves.

Any organisation can become an EnCO by demonstrating 'Balanced High' achieving outcomes cross the five EnCO pillars: Engagement, Alertness, Skills, Recognition and Adaptation.

EnCO registration and display of the logo act as evidence of good practice to shareholders, regulators, customers and colleagues through externally verified recognition. Becoming part of the wider EnCO community also enables sharing of good practice to further drive the continual improvement mindset needed.

Registered EnCO Consultants (status gained through training) and Approved EnCO Practitioners (with proven experience) can support organisations to achieve the EnCO status.

#### Further reading

- *Case-studies and process, EnCO Website at [www.energyconsciousorganisation.org.uk](http://www.energyconsciousorganisation.org.uk)*
- *Making change the norm, by Jes Rutter, Energy in Buildings and Industry Magazine, Feb 2021*
- *Energy consciousness has never been more important, by Jes Rutter, Energy World, Jan 2021*
- *Tools and techniques to deliver behaviour change, by James Brittain, CPD module 06, Series 16, Energy in Buildings and Industry Magazine, Nov/Dec 2018*
- *Energy management systems - Requirements with guidance for use, BS EN ISO 50001:2018*
- *International Performance Measurement and Verification Protocol, Core Concepts, EVO 10000 - 1.2016*
- *Behaviour change for low-cost energy savings, by James Brittain, CPD module 02, Series 14, Energy in Buildings and Industry Magazine, June 2016*
- *Ten steps to change, by John Mulholland, Energy in Buildings and Industry Magazine, July/August 2014.*

## BEHAVIOUR CHANGE

Please mark your answers below by placing a cross in the box. Don't forget that some questions might have more than one correct answer. You may find it helpful to mark the answers in pencil first before filling in the final answers in ink. Once you have completed the answer sheet, return it to the address below. Photocopies are acceptable.

### QUESTIONS

**1) What does EnCO stand for?**

- Energy Conscious Operative
- Energy Conscious Organisation
- Environmental Conscious Organisation
- Environmental Community Obligation

**2) What is the acronym used by the EnCO framework?**

- AESRA
- EASRA
- SRAEA
- EARAS

**3) What percentage of total available savings can be delivered through behaviour change?**

- 5 per cent
- 15 per cent
- 50 per cent
- 95 per cent

**4) According to the Energy Hierarchy which activities would normally be prioritised first?**

- Being alert to avoidable energy waste
- Investing in clean technologies
- Investing in green energy sources
- Offsetting greenhouse gas emissions

**5) According to Critical Mass Theory, what percentage of a population do we need to (typically) engage to reach a tipping point?**

- 1 per cent
- 2 to 5 per cent
- 10 to 20 per cent
- >50 per cent

**6) What does 'AEU' stand for?**

- All energy undertakings

- Actual energy users
- All energy users
- Actionable energy undertakings

**7) Who are not generally considered to be significant energy users?**

- Top managers
- Operations staff
- Energy champions
- Everyone

**8) Who are the people we need to engage to raise alertness across an organisation?**

- Top management
- Operations staff
- Everyday champions
- Everyone

**9) What aspect of measurement and verification (M&V) should be done prior to any programme?**

- Third party verification of reports
- M&V Plan
- Routine adjustments
- Non-routine adjustments

**10) What is the name of the most widely used M&V protocol?**

- Energy Conscious Organisation Protocol
- Efficiency Valuation Organization Protocol
- International Performance Measurement and Verification Protocol
- ISO 50001 Energy Management System Protocol

**PLEASE COMPLETE YOUR DETAILS BELOW IN BLOCK CAPITALS**

Name ..... (Mr, Mrs, Ms) .....

Business .....

Business Address .....

..... Post Code .....

email address .....

Tel No. ....

**COMPLETED ANSWERS SHOULD BE MAILED TO:**

**The Education Department, Energy in Buildings & Industry, P.O. Box 825, GUILDFORD, GU4 8WQ. Or scan and e-mail to editor@eibi.co.uk. All modules will then be supplied to the Energy Institute for marking**

## How to obtain a CPD accreditation from the Energy Institute

**Energy in Buildings and Industry** and the **Energy Institute** are delighted to have teamed up to bring you this **Continuing Professional Development** initiative.

This is the ninth module in the eighteenth series and focuses on **Behaviour Change**. It is accompanied by a set of multiple-choice questions.

**To qualify for a CPD certificate readers must submit at least eight of the ten sets of questions from this series of modules to EIBI for the Energy Institute to mark.** Anyone achieving at least eight out of ten correct answers on eight separate articles qualifies for an Energy Institute CPD certificate. This can be obtained, on successful completion of the course and notification by the Energy Institute, **free of charge** for both Energy Institute members and non-members.

The articles, written by a qualified member of the Energy Institute, will appeal to those new to energy management and those with more experience of the subject.

**Modules from the past 17 series can be obtained free of charge. Send your request to editor@eibi.co.uk. Alternatively, they can be downloaded from the EIBI website: www.eibi.co.uk**

### SERIES 17

MAY 2019 - APR 2020

- 1 Batteries & Storage
- 2 Energy as a Service
- 3 Water Management
- 4 Demand Side Response
- 5 Drives & Motors
- 6 Blockchain Technology
- 7 Compressed Air
- 8 Energy Purchasing
- 9 Space Heating
- 10 Data Centre Management

### SERIES 18

MAY / JUNE 2020 - MAY 2021

- 1 Energy Efficiency Legislation
- 2 Building Controls
- 3 Smart Grids
- 4 Lighting Technology
- 5 Heat Pumps
- 6 Metering & Monitoring
- 7 Air Conditioning
- 8 Boilers & Burners
- 9 Behaviour Change
- 10 Combined Heat & Power\*

\*ONLY available to download from the website after publication date

**Terms:** in submitting your completed answers you are indicating consent to *EIBI's* holding and processing the personal data you have provided to us, in accordance with legal bases set out under data protection law. Further to this, *EIBI* will share your details with the Energy Institute (EI) with whom this CPD series is run in contractual partnership. The EI will process your details for the purposes of marking your answers and issuing your CPD certificate. Your details will be kept securely at all times and in a manner compliant with all relevant data protection laws. For full details on the EI's privacy policy please visit [www.energyinst.org/privacy](http://www.energyinst.org/privacy).

• To hear more from the EI subscribe to our mailing list: visit <https://myprofile.energyinst.org/EmailPreferences/Subscribe>

**Leading in energy management**

- Receive quality training from industry experts
- Make a difference in your organisation
- Network with other professionals
- Access free CPD resources
- Gain charterhip status

**10% off for Readers - promo code EIBI19**

[energy-inst.org/energy-management](http://energy-inst.org/energy-management)