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MODULE SIX

BEHAVIOUR CHANGE

The human factor in energy management

Kit Oung, energy management advisor, author, board member of EMA and 2degrees

Everyone, at some point or another, talks about savings energy and energy reduction. This suggests that the public is aware of all kinds of actions available to save energy ranging from things they can do on a routine basis to things that they can buy to become more efficient. For over 40 years, improvements in energy performance in buildings and industry were achieved through the installation of new and improved technologies.

A quick survey of the current capabilities for energy efficiency showed that existing energy saving techniques and technologies can reduce energy consumption by 73 per cent¹ and that up to 25 per cent of the savings can be made without major capital costs or changes to business practices.² However, the use and promotion of energy-efficient technologies is only achieving a fraction of its potential. Surveys by the International Energy Agency reported that less than 1 per cent savings has been achieved year on year.³

There are many views as to why buildings and industry are slow on becoming energy efficient. Some fingers point to failure in energy market and policy to expedite the diffusion of new technology. Others point to the low cost of energy and/or organisational short-sightedness requiring short return on investment (ROI).

Coupled with this, many people also think in a silo manner. When they are talking about energy saving or climate change, they care about and know how to save energy. However, when the topic of conversation changes, the action to save energy disappears from conscious thought.

A survey of top management of organisations by Harvard Business Review Analytical Services reported that seven out of the top ten reasons organisations did not invest in energy efficiency were within their own control and influence. As seen in Figure 1, the



three biggest internal reasons are: 1) failure to assess the consequence of not reducing energy consumption; 2) uncertainty over the viability of opportunities to save, and; 3) leadership attitudes towards avoiding new costs.⁴

Employee engagement

For the reasons above, employee engagement and behavioural change techniques are emerging. Many organisations, consultants, and even universities and governments⁵ are researching the silver bullet on creating employee buy in – the one way to create employee engagement.

Many turn to an array of activities such as staff engagement surveys, awareness training, energy behaviour campaigns, and embedding energy into appraisal processes to the more psychologically-based techniques such as “nudging”, neuro linguistic programming (NLPs) and other techniques.

Simply put, an organisation is made up of (1) people working together in an (2) defined structure or hierarchy (3) using purposely designed ways of working and processes as (4) informed by its

measurements and information to make good quality products and/or services. Remove any of these four components, and an organisation would not function or exist. When all four are present, (5) the synergistic effect creates an environment for all elements to function.

People-based techniques has phased in and out between the scientific-based management movement popularised by Frederick Taylor in the late 1880s in Midvale Steel, Pennsylvania and the people-based management movement popularised by Elton Mayo in the early 1920s in Hawthorn Works, Illinois. At a ripe old age, Frederick acknowledged the role of human factors: “I was a young man in years but I give you my word I was a great deal older than I am now, what with the worry, meanness, and contemptibleness of the whole damn thing. It is a horrid life for any man to live not being able to look any workman in the face without seeing hostility there, and a feeling that every man around you is your virtual enemy.”⁶

An organisation could have the best organisational structure, world-class facilities, and state-of-the-art tools

and machinery, however, if it cannot not motivate and move its employees towards a common vision, its structure and its facilities and tools are of little use. Many CEOs attribute their people and organisational culture as more important than the business processes and products their organisation manufactures.

Similarly, to be successful in consuming energy efficiently and effectively, an organisation needs to address all five aspects of managing energy: people, structure, tools and techniques, information and insights and the synergistic effects.

An organisation may have an energy manager. However, he or she cannot foreseeably be saving energy in every location all the time. At its core, the organisation needs a large group of people to be interested in energy efficiency, consciously thinking about ways to save energy, and then sustaining the improvements made.

In fact, all organisations have the keys needed to unlock employee engagement. Behavioural change and staff engagement programmes like those popularised by John Kotter⁸, Robert Cialdini⁹, Patrick Lencioni¹⁰, Daniel Goleman¹¹, Daniel Kahneman¹² and Dan Ariely¹³, focus inwards. This is because all employees are experts in the organisations' 'politics' and 'ways of working'. They know their jobs, what works and what they could 'get away with'.

An organisation might need external support in some behavioural tools and techniques. But to be successful, it first needs to work out a coherent plan: using knowledge and information about its employees, linking and integrating the right tools and techniques into the existing governance structure, and implementing and reviewing the effectiveness of its employee engagement.

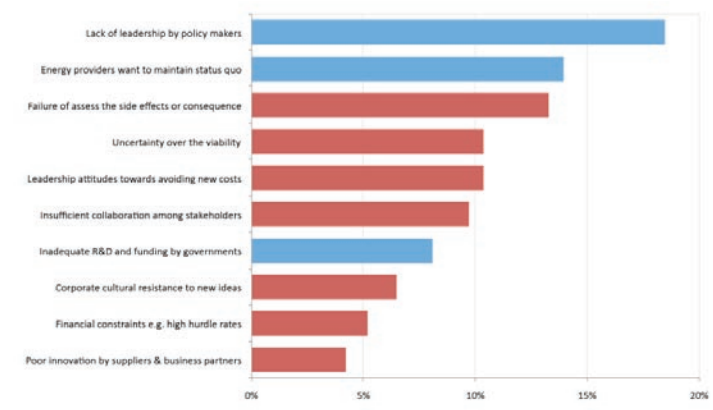
The following common-sense-but-not-common-practice bullet points help to get energy efficient behaviours off the ground by creating a coherent plan.

Have an energy management plan that is deliverable

Many organisations declare an objective and target and then find opportunities to meet its targets. Some examples are, "We will reduce our carbon emissions by 100 per cent in 10 years or we close our existing facilities." "The company will reduce our energy consumption by 15 per cent in one year". These are badly written and very dangerous energy objectives.

The chosen organisational target needs to be backed up with real and defined

Figure 1: Top 10 reasons organisation are not investing in energy savings.



Source: Data adapted from Harvard Business Review Analytical Services

“...CEOs remain convinced that sustainability will transform their industries; that leadership can bring competitive advantage. But beneath this commitment, frustration is clearly evident”

UN Global Compact-Accenture CEO Study¹⁷

'projects'. Information such as "How much does it cost?," "What is its projected reduction?," "What is the delivery time?," "What are the detailed steps to implementation?," "Have the project risks been identified?," and "Have they been agreed?" needs to be available upfront.

Very frequently, it is also not possible to implement the all identified 'projects' in one go. Projects need to be spaced out with defined timeframes for implementation, identified key internal stakeholders and the resources needed to deliver the savings.

Pfizer in Ireland delivered its corporation's energy targets from a Energy Master Plan with a portfolio of projects that could be implemented in phases over a five-year period.

Objectives and targets that are unachievable set the team up for failure. It creates undue stress, is

very demotivating and a waste of organisational time and resources.

Make sure that the organisation has energy KPIs that relate to everyone.

Performance measures are necessary to inform the organisation where they are in relation to where the strategy says they want to be. In many organisations, success of a project relies on one overall performance indicator. While using this indicator gives top management information about its relative successes in energy efficiency, it does little to show how the shop floor employees can contribute towards energy savings.

Figure 2 shows an example of the direct actions of employees towards natural gas consumption within the building. The figure was prepared by using the 5-whys questioning technique. The organisation could use the same technique to drill down and develop tailored energy KPIs for everyone in the

“... our technology contributes only to 30 per cent of the company's success. Our people and organisational culture is responsible for the other 70 per cent. ...”

Ken Iverson, former CEO of Nucor Steel⁷

organisation. It also doubles up as a tick sheet for communication, operational and maintenance requirements, and training requirements.

Be authentic in the energy efficiency intentions and actions of top management

A Lane4¹⁴ survey of "hearts and minds" reported that acting with integrity, showing personal interest in people, delivering on promises, behaving in a consistent manner, etc. are activities that build trust in the organisation's leadership. In the same survey, employees also said that their managers do the exact opposite.

This means top management must be exemplars for the behaviours they want to create. Top management must be seen, heard, and felt to be actively contributing towards energy savings. Being inauthentic is very easy to identify and significantly undoes the messages of energy efficiency. Telling employees to save energy but leaving office lights, fans, and other energy use on while out of office will detract from the message of authenticity.

Communicate, communicate and communicate ten times more and in simple language

Many of the languages and terminologies used in energy management are very scientific or engineering focused by nature. Words such as "high efficiency", "premium", "eco", "low carbon", "green", and "smart" mean something to the technical folks. It makes them feel knowledgeable and important. It may also acts as a shield to protect them from the things with which he/she is less familiar. However, other employees, concerned with their own work, would be unfamiliar with the jargon used.

The use of technical jargon also does not help the boardroom assess its risk and rewards. It doesn't facilitate the board to make informed decisions. In fact, it creates a perfect environment for confusion. When this sets in, energy efficiency is shelved.

Once the message is simplified, it needs to be communicated on a consistent and repeated basis. Successful organisations utilise a variety of methods to communicate ten times more often than other organisations.

Create opportunities for employees to get involved

There is nothing worse than engaging in and being motivated to do something only to find there is nothing that could be done. The organisation needs to

create a platform where employees can contribute towards energy reduction and constantly reinforce energy efficient behaviour by integrating it into normal practices.

GE, GSK, and Diageo reduce their energy consumption significantly by engaging their own employees to tease out opportunities for improvements. These are not limited only to energy but also in water, scheduling, waste, production rate losses, etc. GE's, GSK's and Diageo's employees own the identified opportunities for

departmental issues such as production, maintenance, quality and human comfort.

The management team in Diversey identified 120 improvement opportunities, of which 30 met the standard hurdle rate set by its top management and achieved 8 per cent energy savings. Diversey's top management re-examined the opportunities. Realigning the corporation's governance system led the organisation to implement 90 of the 120 opportunities, resulting in a 25 per cent energy reduction with \$5m less capital.¹⁶

shoulder goes a long way to encourage further successes.

Understanding the human equations within an organisation can influence the success in using energy efficiently and effectively. When planning for behaviour change, managers in an organisation need to:

- resolve or arbitrate inter-departmental conflict of interest. This is especially true when it involves production, maintenance, quality and human comfort;
- set clear, stretched and realistic targets

for change to focus employees' mind-set and interest. Employees begin to focus on achieving the objectives and tasks;

- use clear, concise and unchanging use of terminologies. Terminology that is simple and understandable builds trust;
- lead by 'visible and audible' example;
- provide opportunities to contribute and take action in their daily work.

Employees take pride in showing what they have achieved;

- assure that their action is meaningful.

The use of simple indicators in necessary to ensure that results are clear and distinguishable;

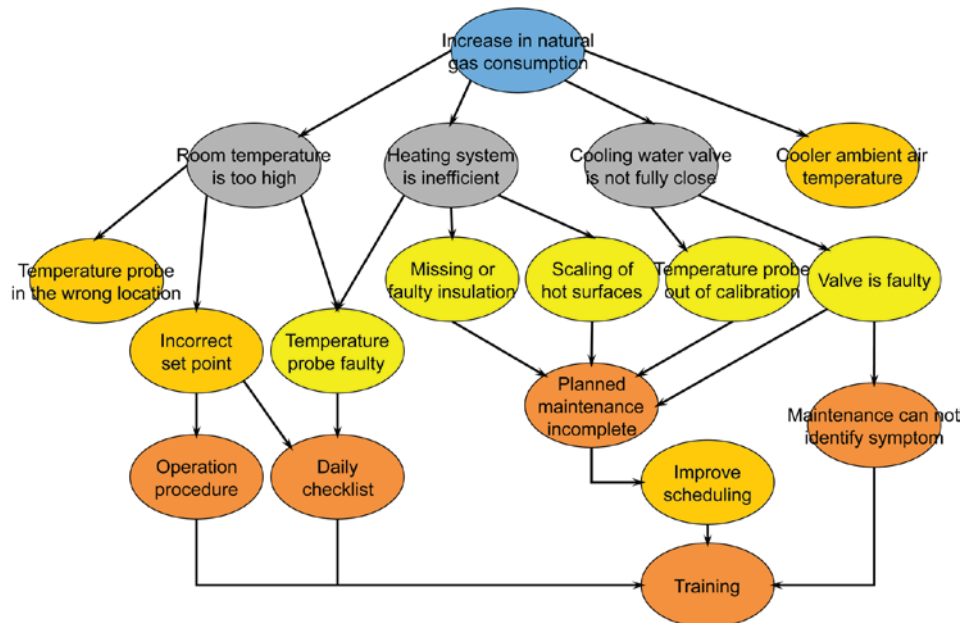
- provide a continual stream of communication and encouragement.

A balance in all seven areas creates a foundation where the organisation can maximise and sustain their energy efficiency efforts. It does so by building a series of processes and steps that slows down and breaks down the people barriers by focusing on the joys of working together towards a common and larger goal.

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Figure 2: Fictitious success map of a heating system



Source: Kit Oung, 2013. Energy audits: The key to delivering real energy reduction. London: BSI Publishing

implementation.

In a more "formal" organisation, it is prudent that energy saving behaviours are also discussed and built in to job descriptions and appraisals. Resources for energy efficiency, e.g. time, training, space for discussions, information, etc. have to be agreed in advance.

Foresee and disarm potential barriers for improvement

More often than not, strong leadership is required to break organisational silos when identifying and implementing energy efficiency. It is important that managers anticipate areas where a potential conflict or barrier may arise, and resolve or arbitrate the conflict in a timely manner. This is especially true when a proposed change involves inter-

Celebrate all successes and learn from all results

Feedback should be given to all employees on how they are doing on energy efficiency. This should not be limited to energy data displays or pin-ups. Verbal updates, status of projects, etc. can be a good way of giving feedback and/or encouragements. Very often it can also act as a prompt for the need to talk to someone to organise for specific things or actions.

Employees like to feel good about a job well done and their efforts count. All psychologists and organisational dynamics guru will attest to the fact that, "happy people make good products. Good products make satisfied customers." Giving an honest and heartfelt congratulation, a pat on the

“... Achieving a goal, accomplishing a task, or resolving a problem often evoked great pleasure and sometimes elation. Even making good progress towards such goals could elicit the same reactions.”

Teresa Amabile, 2011¹⁷

BEHAVIOUR CHANGE

Please mark your answers on the sheet below by placing a cross in the box next to the correct answer. Only mark one box for each question. 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 in ink, return it to the address below. Photocopies are acceptable.

QUESTIONS

1. In energy management, the concept of behaviour change is about:

- giving rewards in exchange for staff overtime
- bringing energy savings into the conscious mind
- punishing employees who arrive for work late
- giving employees more responsibilities

2. An organisation is made up of:

- everyone living near the organisation
- shareholders of the organisation
- people, tools and machinery, a structure to bind everything together
- tools and machinery owned by the organisation

3. What is the top reason management does not invest in energy efficiency?

- do not understand the complex language used to describe energy savings opportunities
- have bigger pot of money as dividend
- climate change is not real and does not affect the organisation
- compliance with regulation is not mandatory

4. When implementing a behaviour change programme, the only way to achieve success is:

- energy awareness training
- staff engagement surveys
- nudge employees to save energy
- it depends on what is needed to create a coherent plan

5. To be effective in using energy effectively and efficiently, an organisation should:

- specify high efficiency equipment only
- appoint an energy manager who is wholly responsible
- purchase renewably-sourced energy
- engage a large group of employees working consciously to save energy

6. Behaviour change, employee engagement and organisational dynamics is:

- a new "black box" subject
- the domain and know-how of a select few
- a coherent plan linking employees with the processes, structure and machinery
- irrelevant in terms of saving energy

7. Having an energy management plan that is realistic, concrete and achievable:

- helps achieve the organisations objectives and is highly motivating for its employees
- doesn't matter as the plan will change anyway
- gives top management more time to go on holiday
- gives the Environment Agency more work to do

8. It is important that everyone has an opportunity to contribute to energy efficiency because:

- it gives employees time off work
- it reinforces the concept of energy efficient behaviours
- it allows top management to plan for redundancy
- it gives employees a change from repetitive work

9. Top management show their real intention to save energy by:

- removing insulation on hot pipes so that employees can insulate them
- investing in an employee transport bus but continuing to drive to work
- telling employees to turn off light and doing so themselves
- taking employees through disciplinary action for not saving energy

10. Organisation that are successful in employee engagement communicates:

- 2 times more
- 5 times more
- 8 times more
- 10 times more

Please complete your details below in block capitals

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