

The Energy Equations

Energy is what it's all about, Alfie

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There is a bewildering array of strategies and interventions all claiming to improve the performance and productivity of people and organizations (e.g., Business Process Improvement, Lean, Six Sigma, Work Design, Reengineering, Organization Development, Human Performance Technology, etc.). What do they have in common? How do they fit together? What is their common language? This paper suggests that the heart of the matter is energy; more specifically, energy expenditures by employees. This paper presents a set of energy equations that can be used as a high-level framework for analyzing and understanding the paths to performance and productivity improvement, regardless of the specific intervention. Indeed, the energy equations can be used to see just where and how the elements of that “bewildering array” of interventions do (or don’t) fit with one another and with the needs of the organization and its people.

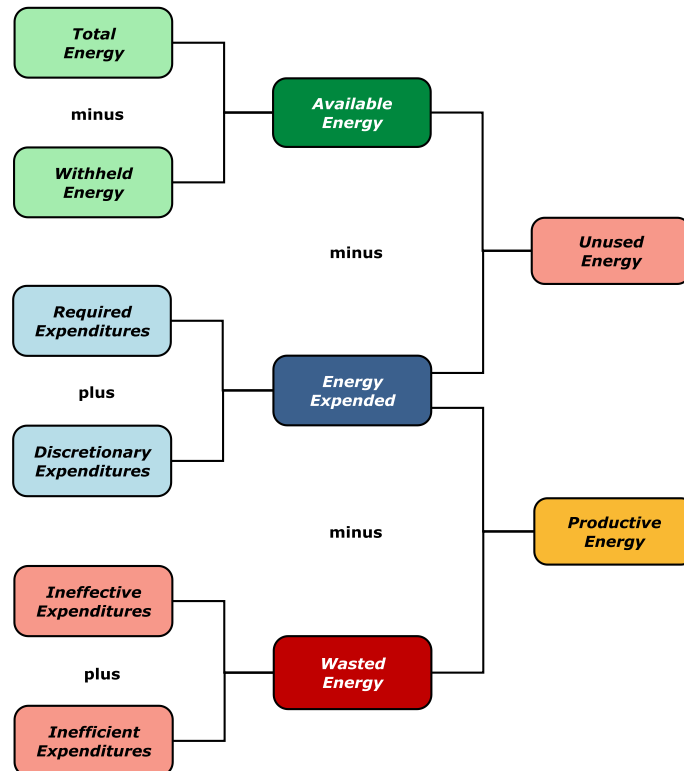
The Energy Equations

Energy: The Heart of the Matter

Have you ever wondered what lies at the very heart of what it is that we performance improvement professionals do – the “heart of the matter” as it were? On my part, I long ago concluded that it is energy. As I’ve written on several occasions over a period spanning 30 years, “The fundamental task of management is to concentrate and channel organizational energy along productive lines” (Nickols, 1982, 1993, 1997, 2000, 2005). To twist the words of an old song, “What it’s all about, Alfie, is *energy*.” If you take a moment to think about it, I think you’ll quickly come to the same conclusion.

When we set out to improve performance or productivity we are setting out to increase or improve energy expenditures, either by reducing inefficiencies or increasing effectiveness or simply raising the level of effort. When we seek to motivate people, we are in fact seeking to increase and/or improve their expenditures of energy. Recent interest in employee engagement is quite telling in this regard: it has as its primary aim getting employees to contribute more of their discretionary effort (i.e., optional expenditures of energy). Interventions like process improvement, work design and reengineering are clearly focused directly on effectiveness and efficiency, which is another way of saying they aim to improve energy expenditures. List almost any work-related, people-related activity and you will quickly be able to tie it to the expenditure of energy by employees.

Shown below is a basic set of relationships that I call “The Energy Equations.”



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Figure 1 – The Energy Equations

The Energy Equations

Each of the elements in the equations above is described next and concludes in a brief review of the utility of these equations.

Productive Energy

Productive energy expenditure is the contribution sought from every employee at every level, from the back room to the board room. Productive energy expenditures are effective and efficient. Energy expenditures are effective to the extent that they bring about the desired results. They are efficient to the extent that the resources used or consumed contribute to those results (i.e., there is a minimum of waste). To the extent that energy expenditures are ineffective or inefficient, productive energy is lower than would otherwise be the case. The path to increased productive energy has two branches and both are well traveled: one is to reduce waste; the other is to increase energy expenditures.

Energy Expended

Expended energy is just what the name implies: energy that is expended. This is typically done in response to two factors. First are the energy expenditures required by the job, task, project, role, assignment, etc. The lower limits of energy expenditures are controlled by management. In other words, there is some minimum level of energy expenditure below which the employee's job might be in jeopardy. However, the upper limits are controlled by the employee and no organization can get more energy out of an employee than that employee is willing to expend. The second factor affecting energy expenditures are the employee's optional or discretionary expenditures. These are above and beyond the energy demands posed by the job, task, etc., and are essentially voluntary in nature.

Required Expenditures

As described immediately above, these are requirements for energy expenditures posed by the job, task, project, etc., and also by managers. "Picking up the pace" is a common term for requiring additional energy expenditures on the part of employees. So are "pushing harder" and "ratcheting up." So, too, is the practice of reducing staff and then expecting the remaining employees to pick up the slack. And, of course, there is the commonplace notion of "doing more with less." All these strategies – and more – are simply ways of trying to directly increase energy expenditures. By themselves, they have little or nothing to do with the effectiveness or efficiency of those expenditures. Consequently, while it might indeed look as though people are working harder, it is also probably the case that they are not working any better. Putting in longer hours doesn't necessarily entail expending more energy let alone in more efficient or effective ways.

Discretionary Expenditures

Discretionary expenditures of energy by employees have moved front and center in recent years, wearing the label of "discretionary effort" and being pursued through a strategy of increasing what is known as "employee engagement." Here, the strategy is to try and get employees to voluntarily expend more energy as a result of feeling valued, involved, committed, rewarded and having a say in matters that are important to them. The key factor in the success of these strategies is probably their authenticity or genuineness. Managers who are simply trying to con employees into giving more won't get far. Even if it succeeds it is essentially a matter of "more," not necessarily better.

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Wasted Energy

Wasted energy is the sum of ineffective and inefficient energy expenditures. These two have long occupied legions of managers, executives, management consultants, industrial engineers and performance and productivity improvement practitioners. Commonplace strategies here are marked by names such as “Business Process Management,” “Work Design (and Redesign),” “Reengineering,” “Six Sigma,” “Statistical Process Control (and other manifestations of the Quality movement),” “Organization Development” and “Human Performance Technology.” All seek to make that form of energy expenditure known as “work” more efficient and, in many cases, more effective as well. For good or bad, there is still plenty of waste out there to be rooted out and eliminated and plenty of tasks and processes to be made more effective.

Ineffective Expenditures

Ineffective energy expenditures are those that are expended with the intent of achieving some desired result but that result is not achieved.

Inefficient Expenditures

Inefficient energy expenditures are those that consume more resources than should be the case. The ratio of results to resources is lower than it could or should be.

Available Energy

Available energy is just what the label implies: energy the employee or worker makes available for the job, task, project or assignment. This is typically far from the total energy possessed by the worker or employee. Some energy is always withheld. We all do that. Some of what is withheld can be viewed as energy reserves, to be released when and where required. Some of what is withheld is exactly that: energy that the employee or worker chooses not to make available but, at the same time, it is not being held in reserve.

Total Energy

Total energy is all the energy the employee or worker could expend without falling into exhaustion or collapse. Interestingly, there are employees who do indeed work themselves to the point of exhaustion (and there are more than a few employers who have driven their workers to this point). The best way to think of this element in the equations is as the supply or level of energy possessed by an employee. It varies with the individual and with factors such as health, nutrition, exercise and the like.

Withheld Energy

With few exceptions, all employees at all levels withhold some energy. Few work themselves to the point of exhaustion or collapse. As mentioned above, some of the employee’s energy supply is being held in reserve in case it is needed. Some is withheld because the employee decides just how much energy will be made available to the employer. By reducing the amount of withheld energy, employees are making more energy available, whether for required or for discretionary expenditures. As noted earlier, recent efforts to increase employee engagement target discretionary expenditures of energy. The important thing to keep in mind about this element is that it reflects the employee’s judgment regarding what constitutes an appropriate commitment of energy to the employer.

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Unused Energy

I saved this one for last because I think it quite possibly represents the greatest source of untapped energy and thus the greatest potential for improvement in performance and productivity. Unused energy is energy the employee chooses to make available but isn't drawn on. The best (and maybe the worst) example of this is the fabled "cushy" job, a job that in fact makes little in the way of demands on an employee. The employee is prepared to expend more energy than is required. In a way, this is a form of wasted energy, except that it is not expended. When we discuss and negotiate with an employee regarding the taking on of extra work we are tapping into this unused supply of energy. Naturally, depending on the employee and the circumstances, the supply of unused energy might be quite modest or it could be significant.

So What?

"So what?" you might ask. Isn't this just a benighted little piece of pseudo-Physics 101? What is the utility of these equations? What is their value?

The utility of these "equations" is as follows:

- You can use them to array, link and provide a context for a wide variety of interventions aiming to improve performance and/or productivity. Where and how do they affect the factors in the equations? Do they increase the expenditure of energy? Do they reduce wasteful expenditures? Or do they perhaps try to reduce the amount of energy that employees withhold?
- You can use them as a framework for investigating performance and productivity. Where do the problems lie? Is it waste? Is it ineffective action? Is it an unusually low level of energy? Are employees holding back? Are the demands made of employees appropriate? If not, are they too high or, worse, are they too low?
- In one company, the equations are being used to provide a conceptual framework for groups that are charged with finding ways and means of improving performance and productivity.
- Here's an application I personally like. Let's say someone comes to you with a proposal that is somehow supposed to make things better. Show them the energy equations and ask them to show you where and how one or more factors in those equations will be affected in a positive way by the intervention being proposed.
- Here's another. Set up a meeting with your key managers and execs, the ones who have their fingers on the pulse of the employee population and ask them to distribute 100% of the energy of the entire employee population among the other elements and see where the problems and the potential lies. More important, take a look at why those distributions exist.
- Most people are well aware that expending too much energy can lead to burnout. There is a growing body of evidence that working too hard is counter-productive. An interesting topic of discussion related to energy expenditures is the extent to which energy expenditures are too high and how reducing them might lead to gains in productivity.
- Here's yet another use for the energy equations. In that dreaded annual performance review, ask each manager to review the equations with each employee being appraised and have the

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manager ask the employee what management could do to “bump up” any of the desirable elements. Also ask what management needs to do to reduce the undesirable elements.

For what it’s worth, I’ll wager you can dream up some of your own applications. Be my guest. Feel free to adopt and adapt the energy equations to suit your own aims and purposes. And remember: The heart of the matter is *energy*. That’s what it’s all about, Alfie.

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