

“Leadership and Management Practices in Industrial Energy Efficiency”: Achieving Real Change in Energy Management/DSM in Industry – Breakthrough or Illusion?

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ABSTRACT

In recent years, we have greatly increased our understanding of processes to achieve lasting energy efficiency improvements to cut the high cost of energy in industry. These methodologies are based on the application of continuous improvement (CI) processes of the type already used widely in industry for quality, safety, environment and reliability management, and are ideally integrated with these existing programs.

The promise of this approach is to capture the full range and scale of cost-effective savings, including savings from changes to core processes as well as ancillaries; and from changes in operating, maintenance, and other business practices, as well as through energy efficient new facility design and retrofits. Further, CI programs offer savings that are sustained and continually enhanced over time, and delivered without the need for large and sustained rebates that ultimately distort the market and distract companies from long-term commitments to energy savings.

This paper summarizes what we have learned over seven years from the use of the One-2-Five CI program in industry. The principles discussed are illustrated with a series of short case studies highlighting successes, lessons learned from shortcomings in our approach, and ways we have overcome these to develop a more complete and robust methodology. These case examples will cover individual company experiences as well as those from government and utility programs. Results are sampled from programs in the Northwest (NE Energy Efficiency Alliance), Ohio (ODOD), Illinois (DCEO), Maine (EEM), Wisconsin (FOE and five utilities), Iowa (Alliant and MEC) and others, as well as from companies like BP (oil), Simplot (food), and Stora Enso (paper).

The paper draws from these experiences to extract lessons learned, particularly:

- Critical success factors for companies to change their energy management.
- Use of these processes in DSM/EE programs, the benefits gained, and lessons learned on factors to ensure effectively implementation.
- The challenge of defining savings and attribution.
- Looking forward to the next five years (and we are still on a steep learning curve). How should programs be designed to capture seven years of practical experience?

General Introduction

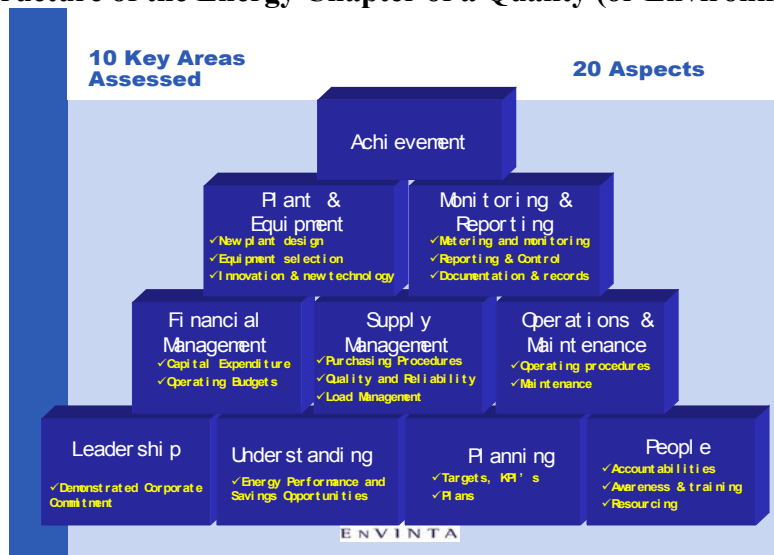
About seven years ago, I had a mid-career crisis. I had run the most successful energy consulting company in Australia for 14 years, and yet I knew there was something fundamentally deficient in the service provided to our customers, but what?

It all came together when I was summoned by the manager of a major auto industry iron foundry, who requested that we conduct another comprehensive energy audit. We had

conducted a detailed savings study five years earlier and implemented all the measures recommended over the following three years, so I was interested to see how they were doing. I was infuriated to find that nearly every measure we had installed had been either by-passed, replaced, and/or had become faulty through lack of maintenance; or like the monitoring and tracking system we installed, was simply not used because no one owned the output.

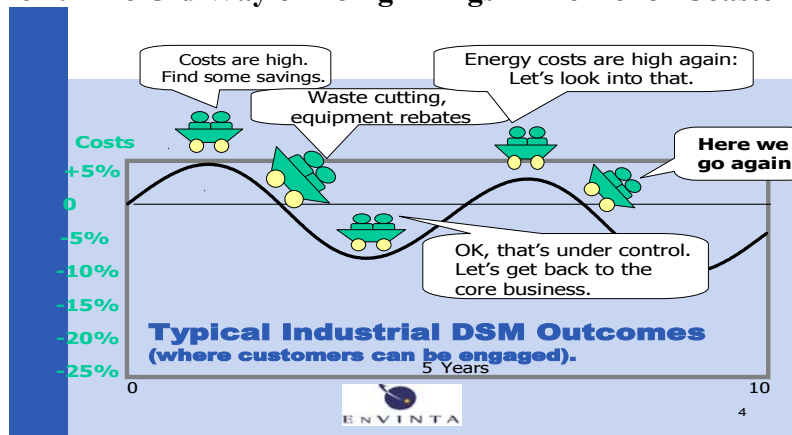
Instead of offering another technical study, I suggested that we help them to extend their quality system to incorporate energy, and build some specific energy tools to help them continuously improve their energy use. We copied the basic structure and philosophy of ISO 9000/14000 to facilitate integration of energy into the core business of companies (see Figure 1). That was the beginning of our new approach ('One-2-Five'), and our dawning understanding of the way to address energy, consistent with how well-run businesses manage issues, rather than the technical energy audit/project implementation model the energy services and utility industry almost universally still uses.

Figure 1: Structure of the Energy Chapter of a Quality (or Environmental) System



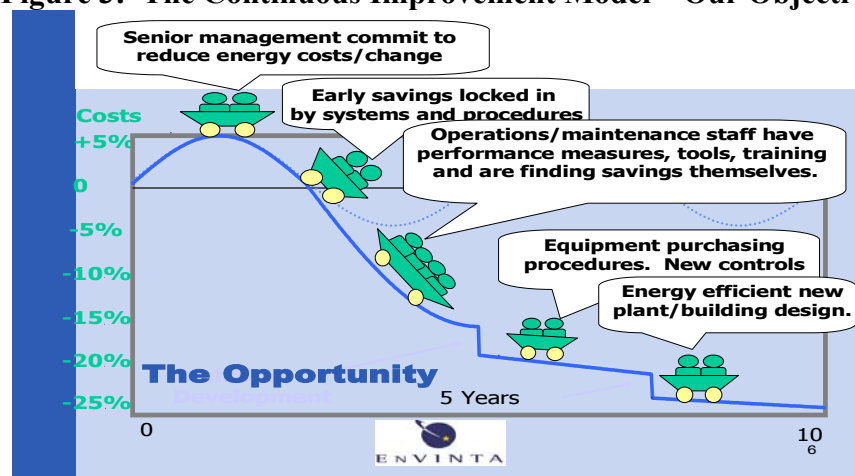
Principles of Continuous Improvement Methodology

Figure 2: The Old Way of Doing Things – The Roller Coaster Ride



Many people will recognize the all too familiar symptoms energy management roller-coaster in Fig. 2 reflecting the energy outcomes generally achieved by the ‘traditional’ energy audit and equipment change-out DSM/energy efficiency methodology. Still all too common, this approach generally targets the services/electrical/maintenance engineer or energy ‘manager’ and aims to identify technical equipment change-outs. Because the energy manager has little authority and the companies have no commitment to reducing energy costs, DSM programs then generally had to apply rebates to make these equipment replacements so cheap that no senior management approval or organizational commitment is required to get them implemented. Despite this, these exclusively technical programs have typically not engaged regularly more than 10-20% of industrial companies and still have a long sales cycle between contact and conclusion of a DSM transaction – often 9 months plus even to commit a simple rebate.

Figure 3: The Continuous Improvement Model – Our Objective



The continuous improvement (CI) methodology (Figure 3) has a completely different process for driving change. It seeks to gain top management buy-in early, and corporate/plant management commitment to implement cost effective change on a five+ year horizon. Early (‘low hanging fruit’) savings are locked in place through formal operating and maintenance procedures. Operations staff are given accountabilities, performance metrics, tools and training, and rewards to allow them to identify new savings in their day to day operations, further driving down costs. When new equipment is being purchased or new plant installed, they are necessarily energy efficient because this is part of their formal business practices and culture.

Some of the basic features of this methodology are:

- Long-term top management commitment, initially gained through a diagnostic process and signing a corporate commitment/partnering agreement.
- A focus on building internal competency in companies – i.e. teach the person to fish, rather than giving them fish (or long-term rebates).
- Aim to integrate energy into other existing CI programs to utilize existing infrastructure to drive change.
- An on-going process, rather than a series of one-off projects.

- Holistic approach that addresses and prioritizes customer needs and then can be linked to all the types DSM offerings, whether they be related to energy efficiency, distributed generation, load management, innovative supply agreements, and also non-technical measures relating to improved business practices.
- Necessarily breaks down utility program silos, as this is not compatible with a holistic CI approach focused on customer prioritized needs.
- Seeking to capturing the full range of savings available, i.e., it helps companies to focus on energy savings in core process using their internal skills and know-how (rather than focusing on ancillary equipment like lighting and compressed air that often use a small fraction of total energy, like happens in many utility programs), and effectively addresses operations and maintenance savings, not just simple hardware retrofits.
- Deals with causes/cures rather than just symptoms, e.g. it helps companies to determine that the real energy opportunity is solving the materials handling problems causing variable dryer load, rather than installing variable speed drives on the drier fans to treat the symptom of variable air demand.
- Works exceptionally well with an effective account management process, where large customers are individually supported in an on-going program. The methodology is used by some utilities to generate key account management plans.

As I mentioned, this methodology may be a new approach for the energy industry but is the traditional approach to dealing with key business issues.

Putting the One-2-Five Diagnostic into Practice: The First Four Years (1999-2002)

Initially, we developed a comprehensive consulting implementation methodology to support customers changing their sustainability practices. As the opening piece of this methodology, we developed a self-diagnostic and planning tool for customers. The initial idea was to develop a self-diagnostic that would generate a simple one to five star rating (hence One-2-Five). This would examine each aspect found in a quality or other CI program and would be self-administered by a senior management team. (If conducted at a site level, participants would include the plant manager, operational and financial managers, energy manager, key engineering/maintenance staff; if administered at a corporate level, participants would be the VP's for those areas). We quickly found that the diagnostic process was far more effective when facilitated by a trained professional, and realized that delivering it in this way was also a good consultative selling tool for our energy management services business.

The One-2-Five diagnostic software quickly took on a life of its own; as we were delivering technical energy services for a number of utilities at the time that they were preparing to enter a competitive energy market as a result of deregulation. One of these utilities had the insight that the diagnostic process gave them a competitive advantage by repositioning them as a proactive partner, and it the same time would efficiently gain a lot of crucial customer information. Thus, the One-2-Five diagnostic was launched as a utility tool.

We found that nearly all customers liked doing the diagnostic, as most senior management teams worry about issues like energy (in fact the US Commerce Department found energy supply and price to be the number 3 issue of concern to industry), but often think it is too technical to use standard CI approaches. The fact that the diagnostic could be conducted in two

hours, including reviewing results, made it interesting as an awareness-raising and planning tool for customers and utilities, and state energy offices and other energy efficiency agencies were attracted by the fact that it effectively attracted and involved senior management.

We found that it was important to do a follow-up session within a week or two of the initial diagnostic to reinforce the results and lock in place an initial plan of action. We used the availability of benchmarking results as a key hook to get managers back to the follow-up meeting. One-2-Five software provides for automatic benchmarking of customer results against the business practices reported by 1,300 other companies that have done the diagnostic. Users can also benchmark against other companies in their specific industry and country (down to 4-digit SIC).

Figure 4: Diagnostic Process



The diagnostic filled a clear hole in the market and the EPA as well as several major utilities decided to use One-2-Five to address a perceived need to address management. Initially, we were over-ambitious in our assessment of the transformative value of the diagnostic process used by itself as had thought that with limited support from utilities many customers would take the findings from the diagnostic and follow-up with implementation actions. As a result, in the initial programs using One-2-Five, we were content to see the diagnostic used as a stand-alone program with Pacific Gas and Electric (PG&E) and Southern California Edison (SCE) in 2000/2001, as well as with the US EPA Energy Star program. While the diagnostics were generally well accepted by customers when delivered, they did not lead to any on-going process. As a result, unless the companies had the skills and internal processes to use the outcomes and progress without support, they often reached a dead-end after they did the diagnostic.

This experience also coincided with the melt-down of California utility deregulation process which resulted in bankruptcy of PG&E, so we did not have an opportunity for a second iteration of these programs to correct the deficiencies that were becoming clear in the design of the delivery program. We did shorten the diagnostic and make some changes to the product to respond to customer comments, but we knew CI was needed in our own process.

The One-2-Five Continuous Improvement Process Comes of Age: 2002-2005

We were refocused on the right path in 2002 when we conducted a pilot for the Northwest Energy Efficiency Alliance. We conducted 5 diagnostics for major sites in the northwest together with the local industry association ICNU, and the Alliance commissioned

Research into Action to conduct an independent review of the process. The Alliance goals are market transformation, and so they looked at the One-2-Five diagnostic from that viewpoint. Their findings were that the diagnostic was very well-received by the management teams of all sites. However, after six months, only one of the five companies (Simplot) was directly using the results to move progress management. One company had established corporate energy savings targets (though it was not clear whether that this was directly related to participating in the diagnostic). Another company with 2 participating sites had not done much because of major company changes, and the fifth was driving their own program apparently independently of the One-2-Five experience.

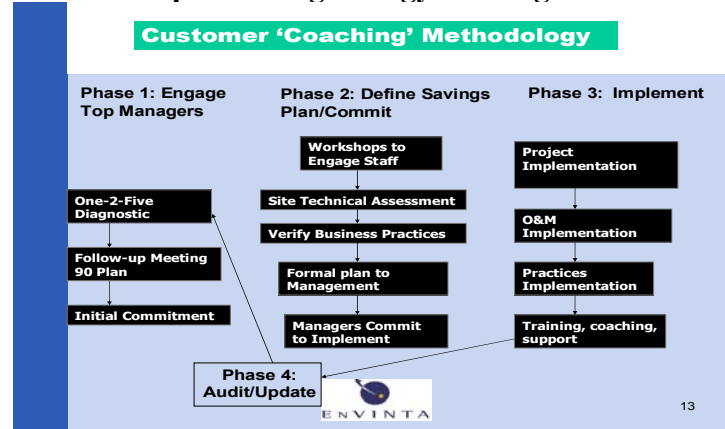
The basic conclusion was that the diagnostic was a very valuable tool to bring energy management to the attention of senior managers, but there was a need to actively follow-up on the enthusiasm and insights generated by the diagnostic outcomes. A key finding was that effective change required an ongoing support process and that there was a need to actively follow-up the diagnostic results to assist companies to quickly take next steps (and even then, change is hard work and is heavily influenced by the company's circumstances at the time). This encouraged us to return to our original intention for One-2-Five, and to examine in more detail the whole change management methodology.

The Alliance offered Simplot the opportunity to gain 50% funding for 6 months of coaching assistance. We utilized our change methodology (implemented by Hatch Engineering) to coach and empower the teams at five Simplot sites to grasp the savings opportunities in their facilities. The sites gained initially about \$0.4 million of savings rapidly through improved operational procedures, and identified five times that level of initial savings in other projects. The company, lead by the efforts of David Hawk, their Director, Energy and Natural Resources, went on to establish a corporate energy plan with targets, funding allocations for capital works and metering and monitoring for energy management.

The program has continued unabated since. Mr. Hawk says; "I am particularly enthusiastic about the way in which One-2-Five involves all plant personnel, provides an analysis of plant and corporate cultures and climates, allows us to create intra-company and industry benchmarks and the process through which One-2-Five helps us to implement a sustained energy conservation and efficiency program. I would recommend One-2-Five as the first step for anyone with a manufacturing plant who wants to have a legitimate sustained energy management program."

In parallel with various successful coaching assignments, we started experimenting with utilizing One-2-Five outcomes to immediately link the defined customer needs with the existing array of largely technical (and often stove-piped) utility programs to see if consistent results could be achieved without such intensive hand-holding. This also met an increasing need in the utilities to present an integrated portfolio offering instead of a series of stand-alone programs, which were quite meaningless to the customer. We felt that if this worked well One-2-Five could be used as an overall marketing and planning process to improve the effectiveness of the utility's overall program portfolio. Working with utilities that were passionate about their customers, we found that this approach could be highly effective, and several of our best customers contributed significant innovations of their own in implementing the process to best suit their own local business environment. The basic coaching methodology used is shown below:

Figure 5: Consulting Methodology to Support Companies Implementing Energy CI Programs



A few outstanding programs that demonstrate what can be done include:

‘Sydney Water Corporation – Every Drop Counts’

Sydney Water is running an aggressive and highly successful water DSM program for its larger industrial and commercial customers built around One-2-Five (and our small company version of One-2-Five – Achiever, for Water). For several years before 2001, Sydney Water offered free audits/technical services. According to Sydney Water at a Senate enquiry in 2003, these programs delivered ‘limited savings as few companies implemented the recommended measures’. ‘Budgetary constraints,’ ‘operating conditions,’ and market volatility in their businesses were their stated reasons for not implement saving measures.

The water DSM program was revamped in 2001 with strong emphasis on corporate commitment using the One-2-Five diagnostic, development of improvement plans, and provision of services to help companies overcome barriers to improve water performance.

Again, quoting the same enquiry report ‘Now we are seeing our programs taken up by industries and implemented’. The savings results have been astounding, with an average of 30% water savings for first 100 companies participating, saving over 11 Megalitres (2.5 million gallons) water/day. To quote the ‘Australian’ Newspaper, Sydney Water is ‘implementing programs that may well act as a pilot scheme for all of Australia’, and indeed there are now programs at various stages of development with 5 other utilities.

Sydney Water ‘Every Drop Counts’ program features:

- Letter of Commitment. Every customer signs a 2-way partnering agreement with Sydney Water that sets out agreed savings targets, time-lines for action and the responsibilities of each party.
- One-2-Five diagnostic. A session is conducted every 12 months to define the new agreed plan and document progress in improving practices at the site. Sydney Water staff now see their role not as a technical service provider, but instead as a ‘change agent’ and help generate a detailed plan of action following the diagnostic.
- Utility support services. Sydney Water provides a range of support services which are rapidly deployed to meet the priority needs defined by the One-2-Five diagnostic session. These include:

- Technical assessments: Free water consumption profile, financial assistance for more detailed technical studies.
- Employee awareness programs
- Best practices guidelines
- On-line water use monitoring and 30% discount on extra meters
- Subscription to 'Water Conserver' Newsletter
- Good corporate citizenship awards, and case studies of success
- Utility commitment to follow-up and provide assistance for companies to improve.

The program was extended in 2004 from large to mid-sized customers with the 'Water Check' program, using our Water Achiever application. Note that there are no rebates offered in this program.

Customers have greatly appreciated the program based on Sydney Water's customer research, and to quote Justin Malcolm, Westin Hotels' Director of Six Sigma, "The 'Every Drop Counts' Business Program is possibly the best program of its type I have seen offered by a utility. The program focuses on increasing awareness, producing immediate reasonable action plans whilst moving forward towards sustainable savings."

Xcel Wisconsin

In 2002, Xcel Energy in Wisconsin established an integrated customer-partnering program utilizing One-2-Five as the common introductory process for all customers to define customer needs (and Energy Achiever for smaller business customers). The company then packaged the EnVinta programs with customer training, interactive software, collaborative account management planning and coordination with the State of Wisconsin's "Focus on Energy" program.

Xcel Account managers delivered this integrated program in a small utility service territory, and in the first 18 months conducted:

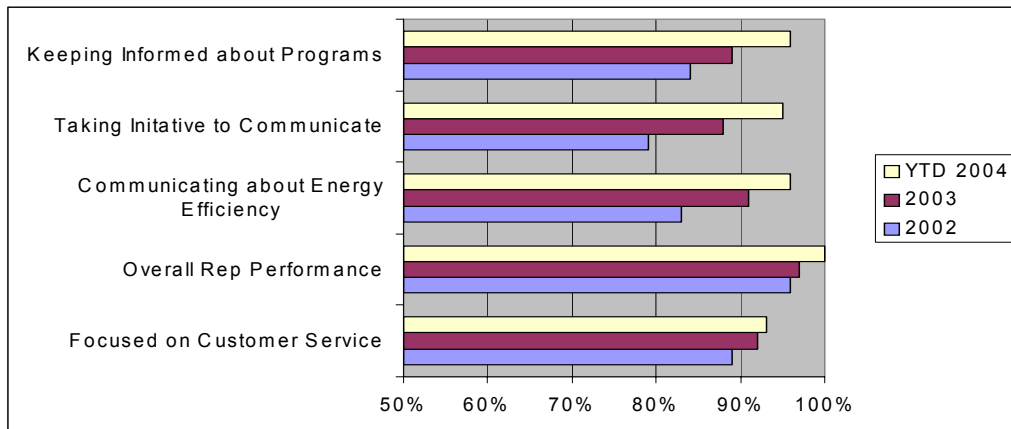
- 16 EnVinta One-2-Five evaluations, with repeat sessions for many of these.
- 11 Energy Achiever diagnostic sessions

Number of customer implemented measures June 03 to Oct 2004: 18

- Total kWh savings (to May 2004): 4.1 million kWh
- Total kWh savings (identified): 12.9 million kWh
- Total therm savings (to date): 903,998 therms
- Total therm savings (identified): 924,000 therms

In addition to the fact that over 75% of customers engaged in the process are conducting implementation projects, the program has significantly increased customer satisfaction with a Wisconsin utility that was already achieving strong customer satisfaction ratings before they started One-2-Five.

Figure 6: Xcel Internal Research on Customer Satisfaction of Business Accounts



One of the key things we learned from these programs is that their success hinges on the responsiveness of utility/agency account management staff, which in turn relies on the policy of the utility or agency to proactively provide rapidly responsive partnering services, rather than the traditionally reactive (and often bureaucratic) utility approach.

Another model that is becoming popular is the private sector delivery approach. The first example of this approach was applied by the Ohio Department of Development, and this has been the model for a program being kicked in Illinois in April 2005.

Ohio Department of Development (ODOD) Program

After the common experience of being dissatisfied with the technical audit approach to energy management, ODOD conducted a pilot with the One-2-Five process in 2002 and has just committed to additional licenses for 2005 – now the third year of the program. In this program, ODOD pays for licenses, and provides One-2-Five training and accreditation for consultants, who take the program to market as a commercial activity. ODOD offers a 50% subsidy up to \$10,000 to participating industrial companies for developing an energy plan, and same support for conducting a technical review.

The One-2-Five diagnostic is used as an initial pre-requisite for participating in the program, and must be done to attain any further ODOD energy efficiency funding. The program has trained eight consultants, half from the Edison Centers (which subsequently withdrew from providing energy services) – leaving four remaining active consultants. The local utilities were initially not willing to invest in participation in the program, but are now interested to participate because of their awareness that it is well regarded by customers. ODOD is using both One-2-Five and our Achiever software for the mid-sized companies. They are planning to implement a marketing program for the first time to promote the program in 2005. Previously the program depended entirely on consultants promoting the program to their customers.

Summary of Lessons Learned in Seven Years

Utility C&I DSM programs need a process to engage senior managers that integrates with their other continuous improvement activities. The One-2-Five facilitated diagnostic has proven to be effective for achieving initial engagement, and based on the outcomes of customer surveys conducted in a large range of utility and government programs is very well-accepted by senior managers of companies up to the very largest and most sophisticated companies. (The simpler 'Achiever' product has had similar acceptance with less sophisticated C&I customers with energy costs below \$0.5M or so, and down to an annual energy cost of about \$50,000). Formal corporate commitment/partnering elements are very useful to reinforce a company's participation. Typically this involves a senior executive (ideally the CEO) signing a 2-way letter of commitment with the utility or agency. This is best accepted by business when making their public commitment is linked to gaining high profile public recognition for their participation and achievements as a good corporate citizen.

Any customer engagement process needs to be intimately linked to implementation support services to gain consistent results. There is much less customer value in 'stove-piped' stand-alone programs in general, but One-2-Five is particularly designed to be an integrated process that prioritizes and intimately links to downstream implementation assistance and incentives. It is not nearly as effective as an isolated, stove-piped 'operations and maintenance' or 'awareness' program without integration to the rest of the portfolio.

Implementation support can be successful in the form of either:

- Effective links with existing utility programs. These can be supplemented by the addition of tools to assist companies to implement management changes that are not specifically supported by utility programs. We are currently expanding the on-line tools available through a program with the NW Alliance to cover issues like 'accountabilities' and 'setting performance indicators'. Note: we have had good success implementing activities with trained and accredited utility staff (e.g. in Xcel WI), as well as with 3rd party contractors (e.g. Ohio program).
- A customized coaching methodology to assist companies to build internal competency as they define and implement energy savings projects and refine and formalize business practices to lock in savings and drive CI.
- Trained and accredited consultants aggressively pursuing on-going implementation with their customers through planning, technical assignments and on-going support.

Our experience across about 20 programs shows that of companies that conduct:

- About 15% of companies that conducted One-2-Five diagnostic sessions with their senior managers, and participate in a single follow-up/planning meeting, will continue on from the diagnostic session to implement savings projects on an on-going basis without further assistance. (This corresponds quite closely with the 15% of businesses that score 3 stars or above in the One-2-Five diagnostic).

- When diagnostic sessions are closely linked with implementation support services and strong account management to assist companies to implement their programs the success rate can increase to 50-75+ % of companies achieving consistent savings outcomes. Similar success rates can be achieved where coaching consulting support (structured hand-holding) is provided, even in the absence of other incentives and utility/agency support programs.
- This methodology has achieved participation and conversion rates far higher than most traditional programs offered to manufacturing industry, with very high levels of customer satisfaction (as for example in the Xcel case). The reason is that it links very well with the normal processes well managed organizations use for managing all other aspects of their business.

The CI process can be linked with very effective utility account management to drive very significant enhancements in customer satisfaction. Note that the process also demands (and helps develop) a higher level of professionalism and consultative selling skills than is the norm in many utilities. Where utilities are willing to rise to the challenge, it results in strong customer satisfaction and savings results based on partnering build on delivery of value – i.e. sustainable business relationships.

Utility (or any other) energy management programs are generally NOT going to drive business change and a continuous improvement philosophy across an organization, where elements of it do not already exist. It is much easier to get results with the One-2-Five process if you can integrate energy management with existing CI programs (quality, safety, environment, plant reliability, maintenance...). This has the advantage that there has already been a significant investment in existing programs with an accepted methodology, management support, and the rest of infrastructure to support change like awareness and training, measurement and reporting processes. e.g. it is easier to incorporate energy training in existing quality circles than as a stand alone program. This is particularly true today as many companies are suffering from ‘change overload’.

One-2-Five is not for everyone. It has good applicability across industry for sites using over \$0.5M of energy/year – as well as in owner-occupied commercial and institutional applications (use Achiever for \$50k-500k users). We have found that it is best to screen out the 25% of customers that will not be well-suited to a formalized CI approach. These are companies that have a ‘seat of the pants’ management culture that is very informal and unstructured, or are struggling to survive. This is a fitness program and, as such, is not appreciated by patients that are bleeding to death.

The One-2-Five energy management methodology can deliver measurable DSM/energy efficiency program outcomes. There has been utility or public utility commission concern about the reliability of savings from programs like One-2-Five that generate some of their savings streams from operations and maintenance sources. This flows from a common, and wrong, utility engineering perception that operational changes are ‘soft’ – i.e. unreliable, un-measurable, unsustainable’, whereas hardware installations result in ‘hard’ savings. This belief is demonstrably false. Changes in operations, maintenance, procurement and other practices can in fact result in savings as firm, and even harder than, hardware installations.

Example: You have a compressed air system in a factory, and gain a rebate to install a new compressor that is 10% more energy efficient. At the same time the compressed air system it supplies increases its air leak rate from 10% to 25% of air supplied. The net benefit? -5% saving.

These are the necessary conditions for operations savings to be considered ‘hard’:

- Written procedures incorporated into plant operating procedures
- Training of staff on the procedure.
- Ideally the usage will be monitored on an on-going basis, e.g., track air consumption
- Conduct audit practices routinely to ensure practices are being implemented
- Ideally, the plant has an overall energy management program with formal accountabilities and performance indicators.

Regulators and customers should require these same conditions for the operation of installed hardware for hardware savings to be accepted as ‘hard’ – reliable and sustainable-- as they are soft savings unless supported by the correct operations and maintenance procedures. I learned that from Mitsubishi seven years ago.

O&M measures can be more cost effective, and businesses cannot always afford to make capital investments. They can also build management and team confidence by offering low capital cost savings, they provide a continuous improvement environment that drives new hardware savings, and most importantly, much greater total savings can be generated. Our experience is that in most companies two-thirds of potential savings opportunities in the short to medium term can come from operations and maintenance.

The challenge of defining savings and attribution in these programs: A challenge for One-2-Five in utility DSM programs is measuring cost-effectiveness within the traditional models of DSM reporting. The key issue is attribution. One-2-Five is an integrating process. Attempts to separate it from other programs and stove-pipe it as a stand-alone program, or to separate it out from account management have resulted in sub-optimal results. An example of this in one program was to classify One-2-Five an ‘Operations and Maintenance’ program and then reject opportunities offered by the program to market rebates to senior managers that have committed to their energy management program through One-2-Five. This has a negative impact both to the customer and to the portfolio.

The approach we recommend is to track all direct impacts that can be attributed to the program, but also to accept and track the flow-on benefits to all programs from customer commitment through One-2-Five. Once integrated with a good account management program, it is relatively easy to track One-2-Five flow-on impacts on other programs, and they can be considerable. It is interesting that in a recent utility study found that in a utility region where there had been high efficiency motor rebates for at least 20 years continuously, that only 15% of companies had motor procurement policies which mandated purchasing of these motors. Ideally, One-2-Five’s benefits should be measured over an extended period based on their overall impacts on the effectiveness of the overall portfolio of programs offered to a class of customers.

The continuous improvement, business-based philosophy can be leveraged to integrate utility programs, whether they are “resource” or “market transformation” programs. Corporate customers are looking for an integrated energy offering. One-2-Five assists utilities to define customer needs and then to deliver a customized and prioritized solution that packages the most appropriate generic program elements to meet customer needs at the time. Furthermore, it provides the ability to repeat this process each 6-12 months to define a new package to meet the

new needs defined at that time and support continuous improvement. This is very different from customers' current experience of being bombarded by diverse utility program messages. By uniting program messages under a theme of continuous improvement in business terms, there is an integrating message that puts energy efficiency and demand response (and distributed generation, renewable energy, retail procurement) on common footing.

Looking Forward to the Next Five Years

We are still on a steep learning curve, but are now totally confident that we are on the right path and accelerating along the curve with our utility and agency partners. With each new experience we are learning from our results and from our partners, and continuously improving the methodology. The One-2-Five you see in three years will be greatly enhanced from the way it is now, in the same way that it has been transformed in the past three years.

Further work is needed and is being undertaken across the country to standardize some of the basic infrastructure for using CI programs:

- Measurement
- Attribution
- Eliminating stove-piped implementation programs
- Integrating account management and DSM functions
- Developing better support tools
- Developing skills in utilities and agencies to utilize CI methodologies – partnering, consultative selling, facilitation, and more attentive follow-up.

We are looking forward with great expectations that we will transform this market.