Deloitte reSources 2013 Study
The Power Shift: Businesses Take a New Look at Energy Strategy

Deloitte reSources 2013 Study provides corporate energy management insights to help inform business and investment decisions.
As a leader in advising energy companies, Deloitte, with strategy and market research firm, Harrison Group, a YouGov Company, has completed its third annual nationwide reSources Study (the “2013 Study” or “Study”) to provide insights that can be useful in helping energy companies and businesses make energy-related investment and business decisions. The study uncovers actions businesses and consumers are taking and expect to take to manage their energy usage, assesses what they know about the energy marketplace, and examines what motivates them to adopt new practices and invest in new technologies.

The reSources 2013 Study was conducted in the February-March 2013 timeframe and, thus, largely reflects attitudes and practices related to the year 2012. The Study is based on 600 online interviews with business decision-makers across all industries responsible for energy management practices at companies with more than 250 employees.

During the same period, Deloitte and Harrison Group also examined the actions consumers are taking to manage their energy usage, their plans for future consumption, and the energy-related products and services they are likely to consider next. The consumer portion of the Study is based on more than 1,500 demographically balanced online interviews with household decision-makers for utility services. A report that examines those results is available at www.deloitte.com/us/resources.
The reSources Study commenced three years ago. It was largely motivated by a desire to capture how businesses and consumers were managing their energy consumption, particularly through electricity management practices, as a result of the recession. During the last two years, the Study observed most companies setting significant energy reduction targets and successfully working toward achieving them. Some of these companies were driven in part by customer or employee motivations, but all were driven by the opportunity for financial savings.

History may well look back at this time period as a peak moment in the rise of the energy management discipline as two driving forces aligned. First, the worst recession in most people’s memories inspired an all-hands-on-deck mentality to cut costs, as companies intensely focused on saving money rather than investing in growth. Second, innovations in lighting, cooling, structural design, smart technologies, and other advancements, garnered attention and offered significant opportunities for savings.

The results were impressive as the majority of companies had two consecutive years of success, working toward goals of reducing consumption by more than 20% over a four- to five-year period. The expectation was that these priorities, trends, and achievements would continue in the reSources 2013 Study, but tides are changing.

The reSources 2013 Study suggests a tipping point may be at hand, reflecting a shifting business mindset and adjusted priorities. The workplace mantra of reducing cost/consumption has eased in the 2013 Study for a variety of reasons: 1) many of the easiest things have already been done — it is getting harder, 2) an improving economic outlook means businesses are increasingly focusing on growth instead of cost cutting — time to expand, and 3) electric costs are perceived to be stabilizing in part because of the availability of low-cost natural gas.

The reSources 2013 Study found that goals for reductions in electricity use have been lowered relative to the last two years and the solutions needed for future savings are becoming more capital-intensive with fewer easy and/or low-cost options available to lower consumption further. Efforts are increasing because “I have to” (regulatory requirements or uncertainty), and less because “I want to” (good corporate citizenship or easy wins). The hassle factor in the fight is increasing, and companies are feeling the strain. Nonetheless, they have not pulled the plug on their energy management efforts, nor do they plan to do so. Most still have significant reduction goals and continue to allocate capital to achieve those goals. In addition, many have expanded these goals beyond electricity to encompass other resources. Companies are also continuing to take matters into their own hands by generating their own electricity on site. As the going has gotten tougher, it appears companies are refocusing, as opposed to retreating. They are taking a new look at their energy strategies as a means to further their overall corporate objectives, which now extend beyond cost cutting.
Current market dynamics strongly influencing the energy management mind-set

It is important to understand the current landscape, since it sets the context in which to interpret the findings of the reSources 2013 Study. First and foremost, the worst of the recession is now behind us. In the midst of the recession, most companies recognized growth opportunities were limited, and in turn, they emphasized cost-cutting initiatives, such as energy management efforts. Now that fears about the recession are on the decline, companies are shifting their focus back to growth. The business climate is improving and there is a general perception that energy prices have leveled off, which has helped to justify waning emphasis on energy management practices. The energy management landscape has changed and so have the priorities.

Energy management still key to competitiveness, but companies doing it less because they want to and more because they have to

The reSources 2012 Study (2012 Study) revealed energy management activities at U.S. companies had intensified since the prior year. Businesses had set ambitious reduction targets and were on the path toward achieving them. The 2013 Study uncovered a softening in that focus, with 81% of businesses reporting that reducing electricity costs is essential to staying competitive from a financial perspective, dropping from 85% in the 2012 Study. Similarly, 76% said they view reducing electricity costs as essential to staying competitive from an image perspective, down five points from the 2012 Study.

Figure 1. Intensity of concern softening

Q: Please use the scale below to indicate how much you agree or disagree with the following statements.
Cutting costs is still the primary motivation for energy management activities, reported by 63% of respondents, followed by internal motivations (49%) and “just the right thing to do” (43%). However, these percentages have dropped from the 2012 Study, where cost cutting was cited by 66% of respondents, internal motivations by 56%, and “just the right thing to do” by 49%. In contrast, regulatory requirements are gaining momentum, being cited by over one-third (36%) as a motivating factor, compared to 32% in last year’s Study and 24% in 2011.

**Figure 2. Trending toward less because “I want to” more because “I have to”**

Q: Which of the following business drivers are primarily responsible for (or facilitated) your company’s decision to implement its resource management programs?
Businesses climb higher, but the incline is getting steeper

Consistent with the two prior years, almost nine in ten businesses (89%) have set goals regarding electricity and energy management practices. A solid majority (57%) say they have been at least somewhat successful in achieving their energy management goals, while about one-third (34%) report being extremely and/or very successful. However, 70% believe cutting electricity usage in the future will be much harder, about the same proportion (69%) as last year. And their experience is bearing out this hypothesis, with two-thirds (68%) reporting rolling out new electricity-related practices in their companies involved lots of ‘hiccups’ that were not expected, compared to 65% last year and 56% in 2011.

Figure 3. Some success, but will be harder in the future

Q: Please use the scale below to indicate how much you agree or disagree with the following statements.

Q: How successful do you feel your company has been in achieving its resource management goals?
Bureaucracy becomes the biggest barrier along with other internal challenges — the hassle factor is increasing

With many of the easier energy management tactics already employed and the solutions required for future savings becoming more capital-intensive, the primary barriers to continued success against energy and resource goals are shifting. One-third of companies (33%) now say bureaucracy is a primary barrier to achieving their electricity and energy management goals, up dramatically from 23% in last year’s study and 17% in 2011. “Length of time for investment to pay off” emerged as the next biggest challenge, cited by 30% of businesses, with lack of dedicated staff (25%) and lack of capital (24%) also seen as major obstacles. Additionally, as incremental gains become more difficult, those responsible for energy management believe they are becoming more isolated. The “hassle-to-benefit” ratio may be shifting unfavorably for future gains — at least until the next economic downturn or significant increases in electricity rates.

One-third of companies say bureaucracy is the primary barrier to achieving goals

Figure 4. Bureaucracy new single biggest barrier

<table>
<thead>
<tr>
<th>Top Barriers</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bureaucracy</td>
<td></td>
<td>23%</td>
</tr>
<tr>
<td>Length of time required for investment to pay off</td>
<td></td>
<td>19%</td>
</tr>
<tr>
<td>Lack of dedicated staff to accomplish the goals</td>
<td>23%</td>
<td>23%</td>
</tr>
<tr>
<td>Difficulty measuring impact on bottom line</td>
<td>23%</td>
<td>23%</td>
</tr>
<tr>
<td>Lack of capital for investment in projects</td>
<td>24%</td>
<td></td>
</tr>
</tbody>
</table>

Q: Which of the following have been primary barriers to achieving resources management goals set by your company?
Despite mounting challenges, businesses remain committed to investing in energy management. Forty percent of businesses have allocated a pool of funds for investing in energy efficiency programs in 2013, down from 49% in the 2012 Study. These funds, however, represent about 14% of their total capital budgets in both years. Businesses continue to pay close attention to the return on investment of their energy management programs. Approximately, six in ten have payoff-period requirements for their energy efficiency investments, with an average payoff-period of three-and-a-half to four years, similar to 2012. About half (52%) have an internal rate of return (IRR) requirement for investments in energy efficiency solutions with an average IRR hurdle rate of 20%.
Companies looking beyond electricity to save, but backing off goals

The 2013 Study showed more companies are focusing on managing resources beyond electricity. More than two-thirds (69%) of companies have set goals related to natural gas consumption in 2013, up from 58% in the 2012 Study. Sixty-two percent of companies say they have goals to improve the energy efficiency of their transport fleets, compared to 51% in the 2012 Study. Nearly three-fourths (73%) have set goals related to water usage. As goals around electricity and other resources expanded, companies focused less on carbon, with 49% setting a carbon goal in 2013, down from 56% in the 2012 Study.

However, compared to last year’s Study results, companies’ targeted reduction levels are generally less aggressive. The average targeted reduction in 2013 across electricity, natural gas, transport fleet, and carbon footprint is 19%, compared to 24% in 2012. Of interest is the fact that three in ten companies factor an expected growth rate into their target level reduction. At the same time, companies are giving themselves fairly equivalent time horizons to accomplish their goals as in the past (three-and-a-half to four years on average). It remains to be seen if this trend will continue in the absence of a compelling need to refocus on cost-cutting activities.

Figure 5. Companies backing off from goals

Q: For each of the areas below, what is the target level reduction you are trying to achieve and over what period of time?

*Not asked for water goals in 2012.
Cost of carbon losing steam in the process
While a solid majority still say their companies are or will soon recognize cost of carbon as an important long-term liability (69% in 2013 versus 72% in 2012), many are struggling with using cost of carbon as a beacon for their energy management practices. This uncertainty stems in part from the challenges associated with measuring the actual cost of carbon, with 79% in the 2013 Study saying it is very difficult to measure (on par with 80% in 2012). On top of measurement challenges, there is no clarity about how or when the cost will be addressed. In fact, there is disagreement among businesses about how the costs would best be addressed, with some favoring a tax on carbon emissions, others preferring a cap-and-trade solution, and still others who would like to see a combination of both. This lack of consensus and the inherent regulatory uncertainty may be contributing to companies’ increasing sense that cost of carbon should not be a focal point of their energy management efforts. Nearly two-thirds (65%) said the cost of carbon is overstated in its importance, up from 59% in 2012. In 2013, 38% of companies indicated they report the results of their carbon management efforts, compared to 43% in 2012.

Figure 6. Reduced focus on cost of carbon
Interest in green energy softens

Over the past two years, the marketplace has witnessed some trial and rejection of green energy offers from electricity suppliers. While more than three-fourths (76%) of companies in 2013 reported awareness of these programs, up slightly from last year (73%), a higher percentage of companies that have purchased renewable energy from their electricity suppliers in the past no longer do so. Thirty-one percent of companies reported currently participating in green and/or renewable energy programs offered by their electricity providers, down from 37% last year. Sixteen percent said they have participated in the past, but not anymore, up from 13% in 2012. Consistent with prior years, cost was cited as the top barrier to participation.

Figure 7. Participation in green energy programs softens

Q: Does your company purchase renewable energy from your electricity supplier?
On-site power generation still on the agenda

Irrespective of whether they take advantage of green energy offered by their electricity supplier, a significant number of companies are taking matters into their own hands when it comes to expanding their energy portfolios. Consistent with 35% in 2012, one-third (33%) reported their companies are generating at least some portion of their electricity supply through on-site generation. Another 15% of companies that are not currently generating any of their electricity supply on site, plan to do so in the future. Renewables are part of the equation for companies that currently generate power on site, with on-site renewable installations accounting for about 15% of their total electricity supply on average and on-site cogeneration accounting for 17% on average.

Figure 8. On-site electricity generation

Q: Does your company currently generate any portion of its electric consumption (excluding backup generation) through on-site generation, cogeneration or renewable supply systems?

Q: Approximately what percentage of your company’s total energy supply is provided by on-site generation, cogeneration and renewable energy sources, and what percentage is provided by other sources?
Money still being left on the table — many companies not actively pursuing renewable energy incentives

Most companies still find it challenging to stay on top of the incentives available for investing in renewable energy — and it may be costing them. Nearly two-thirds (64%) said it is very difficult to follow or keep up with the financial and/or tax incentives available, consistent with the two prior years of the reSources Study. Companies that are investing in expanding their renewable energy footprints without fully exploring available tax incentives are leaving money on the table, and companies that fail to consider rebates and incentives when calculating the cost of future renewable investments are likely building business cases and making decisions with incomplete information. Fewer than one-in-five (17%) reported they are “very active” in tracking the tax credits and incentives associated with their renewable energy investments.
Four groups of companies have emerged, distinguished by the scope and sophistication of their energy management strategies and degree of success achieved

Deloitte has developed a Capability Maturity Model (CMM) for energy management practices organized around seven key capability categories. The CMM defines a company’s current state and guides their future vision.

Seven key capability categories

<table>
<thead>
<tr>
<th>Vision and strategy</th>
<th>Goal and target setting</th>
<th>Tactics and methods</th>
<th>Capital investment</th>
<th>Performance measurement and management</th>
<th>Reporting and disclosure</th>
<th>Enabling systems and tools</th>
</tr>
</thead>
</table>

Statistical analysis of the reSources 2013 Study data associated with each of these capability areas reveals a correlation between the companies’ state of maturity and their degree of success in attaining targeted reductions in energy usage. That is, the maturity of the companies’ capabilities with regard to their practices in each of the capability categories was found to be a solid predictor of actual achievement against energy management goals. Study data was used as inputs to create maturity scores for each capability category and to classify companies as Basic, Engaged, Advanced, or Leading in each area, and overall. Results show that just 16% of companies are classified as Leading, with 31% identified as Advanced, 29% Engaged, and 24% Basic. On average, Leading companies have been able to achieve an annual percentage reduction in electricity usage of 7.2% versus 4.8% for those companies classified as Advanced. Companies classified as Engaged have been able to reduce their usage by 3.3% on average versus 2.4% for those in the Basic classification.

Figure 9. Distribution of capability maturity scores and annual percentage reductions in electricity usage

Percent of companies at each stage of maturity

![Bar chart showing distribution of capability maturity scores and annual percentage reductions in electricity usage. Basic: 24%, Engaged: 29%, Advanced: 31%, Leading: 16%. Average annual percentage reductions: Basic: 2.4%, Engaged: 3.3%, Advanced: 4.8%, Leading: 7.2%.]
Businesses in each of the four classifications exhibit certain common energy management “characteristics” that distinguish their classification, and thus serve as high-level indicators of where any particular businesses that possess similar characteristics are likely to be classified — and the associated level of energy consumption reduction that should be expected.

Figure 10. Companies at each state of maturity distinguished by the scope and sophistication of their energy management strategies

<table>
<thead>
<tr>
<th>Classification</th>
<th>Description</th>
<th>Percentage</th>
</tr>
</thead>
</table>
| Basic          | • Fewer goals, primarily electricity focused — informal for most  
• Driven primarily by desire to cut costs  
• Still some “low hanging fruit” in electricity management tactics — few venturing into more capital-intensive tactics  
• Barriers most often related to staffing challenges  
• Not consistently tracking progress against goals  
• Most employees, including senior management, have little accountability for progress on goals — few direct links to employee performance | 24%        |
| Engaged        | • Beginning to focus on one-to-two goals outside of just electricity; goals still tend to be informal  
• Cost cutting is a key driver, but many are motivated by “just the right thing to do”  
• Most covering the basic tactics and starting to explore what is required next for future gains  
• Progress toward goals tracked more consistently  
• Lack of commitment from those without direct responsibility for energy management is a barrier to engaging the broader organization | 29%        |
| Advanced       | • Multiple, more formalized goals  
• Carbon management takes on greater importance  
• Cutting costs, corporate betterment and competitive advantage often key drivers  
• More likely to have implemented new energy management procedures/practices and moving into more capital-intensive efforts  
• Multiple measurement systems in place to track and verify progress against goals  
• Key barriers are finding ways to connect resource management goals to overall business strategies | 31%        |
| Leading        | • More resource management areas targeted, and goals formalized  
• Managing carbon highly important with majority reporting results of carbon efforts externally  
• Drivers of goals coming from a number of directions — executive mandates, regulators, and other stakeholders  
• Moved on to activities well beyond the lower hanging fruit  
• Goals linked to performance metrics for most employees, particularly senior management  
• Unexpected complexity, bureaucracy, and limited capital funds among top barriers | 16%        |
Concluding thoughts

What does it all mean?
The reSources 2013 data appears to indicate that U.S. businesses are shifting their emphasis from cost cutting to growth, the internal competition for capital is increasing, making it tougher for energy management programs to secure funding. This is particularly the case where the easiest energy management tactics have been deployed and future efforts will require more capital investment than ever before. The ‘low hanging fruit’ has already been picked. As gains become more difficult, those responsible for leading energy management efforts are becoming more isolated. They are encountering more bureaucracy and likely receiving less management attention.

These crossroads of objectives will lead to challenging times for those responsible for energy management, and they may have to reposition themselves as agents of growth, as well as champions of cost cutting. While programs and efforts targeted toward reduced consumption are already in motion and results are expected, executive demands may well increasingly focus on energy management solutions that not only cut costs, but also further the organization’s broader business objectives.

While challenged, companies are not abandoning ship as the tide changes. Bolstered by their successes over the previous two years, many are taking a new look at their energy strategies and transforming them to conform with the changing business environment.

A quick word of caution
The reSources 2013 Study covered a period of time that followed the recent recession. This same period has witnessed euphoria over the potential for low U.S. natural gas prices for years to come as a result of U.S. shale gas potential. Almost overnight, the U.S. may well be moving from an importer to a net exporter of natural gas. This abundance of natural gas has been reflected in its price, where the average cost of natural gas for 2010, 2011, and 2012 was $4.37, $4.00, and $2.75 (USD per MMBtu), respectively.¹ When, and how much, the price of natural gas will increase in the future is the current subject of much debate. What is not debatable is how much U.S. electric power generation has shifted away from coal and nuclear in the last three years and over to natural gas; and it is generally acknowledged that this trend will continue.

So, why is that so important here? As natural gas prices rise over time, so will the price of electricity. Which raises the question of whether the 2013 Study results reflect a false sense of security around future electricity prices by many U.S. businesses. If indeed electricity prices rise to levels many predict, the economic justification for significant incremental investments in energy management may not be far behind.

¹ Average annual spot natural gas prices at Henry Hub, U.S. Energy Information Administration.
**What is next?**

Regardless of the potential impact of rising energy prices on energy management practices, moving ahead, energy management efforts will need to align more closely with business strategies, in areas such as new product development, supply chain optimization, sourcing and procurement, and asset management. For example, a company may decide to manufacture a new product in a certain location both to obtain secure, low-cost energy supplies and to be in close proximity to markets for optimal efficiency in shipping and logistics.

It is likely those responsible for energy management will continue to focus on making choices about technologies, locations, fuels, and more, but the motivation will likely be different: It will be about growth, not just cost reduction. Those who understand this shift and incorporate energy strategy into their broader business decision making will be poised to gain a competitive advantage.

Against this backdrop, the questions company executives might logically be asking are:

- Where do I stand versus others that have allocated capital for energy projects?
- If I “wanted to move up the Capability Maturity Model curve,” what steps should I be considering?
- How can I align my company’s energy strategy with our broader company strategies; and is energy management appropriately positioned in the organization to provide increased value?

With over 600 datasets from the 2013 Study, Deloitte developed a U.S. CMM against which individual companies can compare their energy management practices. To take advantage of the opportunity to benchmark your company’s energy management practices or to schedule a meeting to discuss the 2013 Study’s findings, please visit the Deloitte reSources Study page at [www.deloitte.com/us/resources](http://www.deloitte.com/us/resources).
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