

The Energy Efficiency Imperative: Top Reasons Energy Efficiency is a Business and Boardroom Issue

Excerpt from [Energy Efficiency Procurement Toolkit](#)

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Energy efficiency is a business and boardroom issue. Many growing trends highlight the importance of investing in energy efficiency measures to address organizational risks and opportunities. Read on to learn about forces such as rising electricity prices, climate change impacts and changing regulator, investor and customer expectations, and how they can affect your organization. This will help you and your finance and procurement teams understand the opportunities ahead for improving your energy profile. You'll also find a link to a handy guide and other resources on energy efficiency procurement below.

Rising electricity prices

While Canada's electricity prices have historically been low – among the cheapest in the OECD – because the majority of the country's power comes from hydroelectric plants that were built and paid off years ago, those power plants are aging and no longer meet the country's needs. The National Energy Board [predicts](#) Canadian electricity prices will increase by 20% in real dollars from 2013 to 2035 reflecting the increasing cost of sourcing new generation and planned improvements to transmission systems. A 2011 [study](#) by CBC News of provincial utilities' power-purchase agreements and financial statements indicates the average cost per kilowatt-hour countrywide will rise more than 50 percent by 2020. [Ontario's long-term energy plan](#), released late 2013, projects a 33 percent rise in industry power bills by 2018, climbing to 55 per cent by 2032. In 2013 BC Hydro [announced](#) a 28 per cent electricity rate hike by 2018 starting with a nine per cent jump in April 2014. Regardless of the source, all predictions are that electricity prices will rise inexorably over the coming 5 – 20 years.

Business people and utilities know that cutting energy waste helps utilities offset their peak loads and avoid the need to construct new power plants. If organizations reduce their energy needs, governments, businesses and ratepayers stand to benefit.

Energy efficiency opportunities

Fortunately, Canada's energy efficiency keeps improving. The latest [research](#) shows a 25.3 percent improvement from 1990 to 2010. Without significant on-going improvements in energy efficiency in end-use sectors, energy use would have increased 46.6 percent between 1990 and 2010 instead of 22.3

percent. These energy savings of 1,680.7 petajoules are equivalent to the energy use of about 32 million cars in 2010.

[Research](#) into Canadian business attitudes on energy efficiency conducted by the [Canadian Energy Efficiency Alliance](#) in 2014 reveals that:

- 73 percent believe it is a high priority.
- 79 percent have invested in energy savings with upfront costs, primarily lighting and improved heating and air equipment.
- 61 percent have noted energy cost increases in the last year.
- 27 percent believe they are doing all they can to save energy.
- 5 percent have conducted energy efficiency audits (with the exception of the institutional/public sector).
- 38 percent have set targets for reductions in energy consumption.

While Canadian business see cost savings as the greatest benefit of energy efficiency measures:

- 41 percent state initial cost as the reason for not doing more to boost their organization's energy efficiency.
- Only 38% have taken advantage of government and utility incentive programs for energy efficiency and conservation.

So while energy efficiency presents business opportunities, Canadian business believes more can and should be done. Investments in energy efficiency over the past fifteen years have resulted in considerable best practice and how-to guidance, which can benefit other organizations.

Growing climate change

While cost is a main driver of energy efficiency improvements, reducing climate change is another.

Extreme weather events and failure to adapt to climate change are among the top seven long-term global risks in terms of likelihood or impact according to [research](#) conducted by the World Economic Forum. These trends are playing out in Canada. The intense storm and flash flooding that hit Toronto in the summer of 2013 set a record as the most expensive natural disaster in Ontario's history—with more than \$850 million in property damage, according to the Insurance Bureau of Canada. The floods, combined with the June 2013 flooding in Alberta and the winter ice storms in Eastern Canada that damaged power lines and transportation infrastructure, led Canadian insurers to receive more than US\$3 billion in loss claims for 2013 related to climate events. Storms that used to occur every forty years are now occurring every six years. The long-term financial impacts of natural catastrophes are [projected](#) to cost Canadians \$5 billion per year by 2020, increasing to an estimated \$21–\$43 billion per year by 2050.

Extreme temperatures and severe weather will impact the bottom line as organizations increase heating and cooling to compensate. Companies, governments and citizens are understanding the link between the increasing severity and frequency of extreme weather events, climate change and expenses.

Although the economic impacts of climate change are significant, Canada has not yet managed to slow its contributions to climate change. [From 1990 to 2010](#), Canada's overall greenhouse gas (GHG) emissions, including those from electricity generation, grew 21.5 percent.

Many Canadian companies are stepping up to do their share of emission reductions. One [study](#) shows that just over 50 percent of Canadian companies have emission reduction targets (although this lags efforts of 80 percent of the world's largest 500 companies which have set targets of some kind). However, the same study (of 200 Canadian companies) showed that high-level corporate leadership is paying increasing attention to climate issues, with 95 percent of surveyed companies having senior officer or board-level sign-off on climate-related business strategies and measures. BCE Inc., for example, has a target to reduce its direct and indirect emissions by 50 percent of 2003 levels by 2020. Their objectives include reducing electricity consumption in buildings, data centres, networks, and reduced fuel consumption in fleet vehicles.

With senior management and the board becoming involved, this trend toward setting greenhouse gas emission reduction targets is expected to grow.

59% of emissions reduction activities undertaken by companies are paid back within 3 years or less.

[Source](#)

Increasing regulation

One of the drivers for increased attention to climate change management is anticipated government legislation in this area. BC and Quebec have carbon pricing measures (carbon tax and cap-and-trade respectively) and Ontario is undertaking a review.

Some major publicly traded companies ([29 in 2013](#)) based or operating in the US are starting to use an internal price of carbon in their business planning. These companies expect an eventual regulatory approach in some form to address climate change. Therefore, they use a carbon price as a planning tool to help identify revenue opportunities, risks, and as an incentive to drive maximum energy efficiencies to reduce costs and guide capital investment decisions. Prices used range from US\$6-60 per metric tonne of CO₂ e, and companies use varying terminology, such as "internal carbon price"; "shadow price"; "internal carbon fee"; "carbon adder" or "carbon cost."

Anticipating future carbon regulation, forward-looking companies are driving down energy costs and carbon emissions now, with the opportunity to reap competitive advantage in future.

Investor demand

Investors are taking steps to understand the carbon footprints of their portfolios. They are starting to recognize the business benefits of target setting and investment in emissions reducing and energy efficiency projects. In order to protect their long-term investments, institutional investors must act to reduce the long-term risks arising from environmental externalities. The [Carbon Disclosure Project](#) is a network of over 800 institutional investors collectively managing over US\$95 trillion in assets and representing over 40 percent of total global capital markets. Every year investors in the network request

GHG and energy management information from globally listed companies – over 5,000 publicly traded companies as of 2014. This information is used to help drive investment flows towards a low carbon and more sustainable economy.

To further accelerate cost effective company action on energy efficiency and carbon reduction about one quarter of this network (304 investors with US\$22 trillion in assets under management) are starting to engage 1,300 of the world's highest emitting companies to take three specific actions:

- 1) Make year-on-year emissions reductions;
- 2) Publicly disclose targets; and
- 3) Invest in ROI-positive projects.

Participating investors seek to better understand the carbon management and energy efficiency initiatives of their portfolio companies and to improve risk management in areas including regulation, operations, fiduciary duty and reputation. They believe proactive carbon and energy management helps companies generate positive returns and so build long-term sustainable businesses.

There is a growing [Canadian and global green bond market](#) as well. Green bonds – which raise money for business projects that help mitigate climate change – grew from zero to US\$1.2 billion in 2014 in Canada. Globally the [green bond market](#) topped US\$36 billion in 2014.

Companies that start now to improve their energy efficiency and reduce emissions will improve shareholder relations, reduce shareholder resolutions and increase access to, and affordability of, capital.

Customer expectations

Business customers, especially large companies, government and institutional purchasers, are increasingly adopting sustainable purchasing practices, engaging suppliers on energy and carbon management and preferring suppliers with strong policies and practices.

A [2013 survey](#) of 180 North American commercial and institutional buyers reveals that sustainability is an active concern, and growing in importance, with nearly 70 percent of procurement professionals personally involved with integrating sustainability considerations into their company's supply chain, up from 58 percent in 2011. The importance of this topic is further supported by the fact that half of the respondents also reported that their company has an executive team member with explicit accountability for integrating sustainability considerations into the supply chain. This suggests that companies are investing at the senior level to make sustainable supply chains a priority.

As more and more organizations take responsibility for the carbon impacts of their supply chains, there will be rising demand placed on suppliers to provide information and data on energy use and energy efficiency efforts.

For example, as an extension of the Carbon Disclosure Project mentioned earlier, over 60 large corporations with US\$1.3 trillion in procurement spend (e.g. Bank of America, L'Oreal, PepsiCo, Pfizer, The Coca Cola Company, etc.) have joined a [collaboration](#) to ask nearly 4,000 suppliers to disclose information on how they are approaching climate risks and opportunities. Among their [questions](#) are a number focused on carbon emissions and energy efficiency, such as:

- Did you have emissions reduction initiatives within the reporting year?
- What are the estimated annual carbon and money savings?
- What is the payback period and lifetime of the initiative?
- What percentage of your total operational spend in the reporting year was on energy?
- How much fuel, electricity, heat, steam, and cooling in MWh did your organization purchased and consumed during the year?

By exerting pressure on their suppliers, increasingly customers are using their influence to improve the sustainability performance of their supply chains. They hope that suppliers will recognize that it is in their own interest to embrace more sustainable modes of operation. Not only does this offer a means to reduce costs by driving efficiency in resource use, but sustainability is likely to become a key differentiator in the marketplace.

Corporate social responsibility

Corporate social responsibility (CSR) is a growing global trend, driven in part by the development in 2010 of a [global standard](#) defining the term and how it should be implemented in business. There are also international voluntary standards for CSR reporting, called the Global Reporting Initiative (GRI). Using these standards over [7,000 companies report](#) on their CSR performance worldwide. GRI provides [guidance](#) to companies to report on energy consumption, energy intensity, reduction of energy consumption, and direct and indirect (supply chain) greenhouse gas emissions and reduction of same. Global standards have also been developed for GHG measurement and reporting, called the [GHG Protocol](#), which the GRI uses in their reporting guidelines.

Thus companies and industries around the world are measuring, targeting, reducing and reporting their energy use and GHG emissions using these common guidelines, and benchmarking their performance to each other to drive continuous improvement. This is also underpinning the trend to companies and organizations engaging their suppliers to reduce their energy use and GHG emissions. This is increasingly being seen as “good management”, not simply a CSR measure.

Risks and opportunities

Rising energy prices, climate change, government regulation, and rising customer and investor demands create both business risks and opportunities for organizations. These forces combine to make energy efficiency, and energy efficiency procurement as a route to realizing energy efficiency benefits, an important business issue.

Check out these resources

To help you address these trends, risks and opportunities, the Supply Chain Management Association’s [Purchaser Power](#) program provides supply chain professionals with the tools, resources and best practices for implementing sustainable procurement practices when purchasing energy consuming equipment for Canadian organizations.