GUIDE TO INTERNAL FINANCING FOR ENERGY EFFICIENCY IN RETAIL

In an ideal world, every energy efficiency project with compelling financial returns could secure funding through a company’s standard project proposal process. However, retail finance teams have many strategic priorities to consider when allocating funds, and energy projects compete with other departments for limited resources. That means even a highly beneficial energy project can be rejected depending on requests from other business units. Even so, energy projects are unique because they provide several business benefits—including reduced operating expenses, improved budget forecasting, and increased brand value. Moreover, few other retail projects can take advantage of such a broad array of external incentives, rebates, and tax credits.

In addition to external financing opportunities (documented in this companion External Financing Guide), there are many innovative internal financing strategies designed to streamline project approvals and recycle energy cost savings, among other goals. These strategies can create a virtuous cycle of efficient operations. Because estimated cost savings from energy projects are easily quantifiable, especially in relation to other types of projects, energy projects are excellent candidates for internal financing approaches.
ABOUT THE GUIDE

This guide is intended to help energy managers and finance professionals at retail companies understand internal financing approaches that can be used for energy projects. The guide details strategies for embedding environmentally conscious thinking into investment decision-making, establishing funds specifically for energy projects, and collaborating across departments to execute projects of all sizes. The guide was informed by existing research, case studies, and interviews with retail energy managers.

Getting Started

Step 1: Consider the following questions before pursuing internal financing. Consult your finance team to confirm any assumptions:

• How does energy efficiency align with the company’s strategic priorities?
• What are the primary reasons why other projects might be prioritized over an energy project with more compelling financial returns? How does the company evaluate proposals against one another?
• Does the energy and/or sustainability team have a track record of making sound financial investments?
• Are other departments requesting funds that could also be opportunities to increase operational efficiency (through energy efficient procurement, training, etc.)?
• Does your department consistently receive sufficient annual funding to warrant a dedicated fund for energy projects?
• How long does it take to get approval for energy projects and is there an opportunity to accelerate this process?
• Does your company operate in jurisdictions with carbon pricing policies and does the business take this into account when making investment decisions?

Step 2: Review the sections in this document and the table in the addendum to narrow down your options before engaging your finance team and company executives.
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For more information about the content in this Guide, contact the RILA/IMT team:

**Erin Hiatt, Senior Manager, Sustainability & Compliance, RILA:** erin.hiatt@RILA.org
**Jonathan Bauer, Program Associate, Market Engagement, IMT:** jonathan.bauer@imt.org

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This resource was completed with support from the Department of Energy's Office of Energy Efficiency and Renewable Energy and the Better Buildings Initiative to highlight innovative proven energy solutions from market leaders in the Retail sector. Find more ideas at the Better Buildings Solution Center at [betterbuildingssolutioncenter.energy.gov](http://betterbuildingssolutioncenter.energy.gov)
Internal carbon pricing is a policy that businesses can establish to assign a cost to the carbon dioxide (CO\textsubscript{2}) emissions or CO\textsubscript{2} equivalent (CO\textsubscript{2}e) generated from company operations. A carbon pricing policy is a way for businesses to internalize the cost of their carbon externalities – a term for the negative impacts carbon emissions have on society and the environment. Such policies are typically structured in one of two ways:

1. A real price (dollars per ton), in which departments or stores pay into a fund proportional to the amount of CO\textsubscript{2}e they’ve emitted. The fund is then used to invest in energy efficiency and renewable energy projects that reduce overall company emissions, while also hedging against the risk of climate legislation.

2. A price signal (dollars per ton), where the cost of carbon shows up as a line item in a company’s financials and is used to inform decisions about capital investments, risk management, and strategic planning.

Why should you use it?

- Your company wants to offset the risks of GHG emissions.
- Your company wants to increase awareness of its environmental impacts among employees, departments, shareholders, and suppliers.
- Your company wants to improve brand value and be viewed as an environmental leader.

Who else is using it?

As of 2015, there are at least 435 major corporations, including 97 in the U.S. and Canada, that use some form of internal carbon pricing. In addition, over 500 companies who are not currently using an internal carbon price report plan to do so by 2017.

LVMH Group, a French multinational luxury goods conglomerate, established an internal carbon fund in 2015. LVMH is comprised of more than 60 subsidiaries including brands like Louis Vuitton, Dior, Sephora, DFS, and others. Their internal carbon policy is structured as a real price, set at 15 euros per ton of emissions. All subsidiaries pay into a fund proportional to their carbon emissions. As of mid-2016, the fund has an estimated value of over 5 million euros. Projects funded by these payments will include the installation of LED lighting and efficient cooling equipment. In the future, the fund may expand to include renewable energy projects. LVMH plans to review its carbon price annually and make adjustments needed to meet its goal of reducing emissions related to their production facilities, logistics facilities, and stores’ direct and indirect energy consumption 25 percent by 2020.

In 2012, Microsoft implemented a progressive carbon pricing policy. Like LVMH, Microsoft’s policy is structured as a real price and is coupled with a carbon fund. As a result of energy projects financed by their internal carbon fund, Microsoft is saving $10 million annually on energy costs, has reduced

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their emissions on the order of 7.5 million metric tons of CO$_2$e, and has invested in 10.2 billion kilowatt-hours worth of renewable energy. Review Microsoft’s report “The Microsoft carbon fee: theory and practice” for more information about their carbon pricing strategy and as a resource for establishing your own price.

Other companies currently using a form of internal carbon pricing include Fruit of the Loom, Delhaize Group, Walt Disney, Canadian Tire, Puma, BMW, Unilever, and others. Many companies anticipate establishing a price on carbon by 2017, such as Walmart, General Mills, Mars, L’Oréal, and others. In the case of Walmart, the company is able to learn from the experiences of its affiliate brand in the U.K., ASDA, which was one of the first U.K. retailers to embed a carbon price signal in all carbon mitigation investment decisions.

**Best practices from early adopters of carbon pricing:**

- **Start the internal carbon pricing conversation now** – Establishing an internal carbon price can take years. Leaders in the industry have been developing and refining their methodologies for as many as eight years. Under the right circumstances, carbon pricing can make a significant impact on a retailer’s energy and sustainability goals within a year.

- **Internal carbon pricing requires a long-term strategy** – Positioning your company long-term is a key consideration when devising a price on carbon for three reasons. First, carbon markets will change over a five-year period and planning ahead allows your company to adapt better than your competition. Second, as your company refines its carbon pricing strategy year after year, more greenhouse gas reductions will be realized. Third, after several years of engaging various business units about your internal carbon price, your company may experience a shift in culture.

- **Don’t let perfect be the enemy of good** – Going back and forth on the perfect price for your company will slow you down. It’s plausible to choose a price and make adjustments as you learn what works best for your company. When in doubt, look at what others are doing. Research the methodologies of leading companies as a guide to getting your company started.

**What are the advantages?**

- **A carbon price can fuel a fund** – If set up as a real price, an internal carbon price can be coupled with an internal carbon fund. Business units pay into this fund based on the amount of CO$_2$e they emit and the funds are used for energy efficiency and renewable energy projects, which reduce overall company emissions.

- **Change business as usual** – If set up as a price signal, where the cost of carbon shows up as a line item in a company’s financials, an internal carbon price can become a standard consideration across a company’s investment decisions. It is not yet a standard business practice to consider carbon externalities when making decisions about capital investments, risk management, and strategic planning.

- **Improve communication with various departments** – By monetizing a company’s carbon emissions, an internal carbon price is an effective way to get the attention of finance and operations personnel.

- **Hedge against future carbon policies** – The World Bank’s 2015 report, “State and Trends of Carbon Pricing,” indicates about 40 national jurisdictions and over 20 cities, states, and regions – representing nearly a quarter of global GHG emissions – are applying a carbon price. China and the United States are leading the way, as carbon pricing practices in these two countries cover the largest volume of emissions. An internal carbon price can give companies an edge over the competition if their jurisdiction adopts a carbon policy and they are already accustomed to operating with one.
What are the downsides?

- **Carbon pricing is an emerging practice** – With new technologies, early adopters often define best practices through lessons learned. For example, setting a carbon price too low limits its impact on investment decisions and GHG emissions reduction, while setting it too high negatively affects a company’s competitiveness. Best practices are still emerging as companies learn from implementation, especially for real price carbon policies.

- **Regional policy uncertainty** – A company may be operating in a jurisdiction considering a carbon pricing policy, which could impact a company’s internal carbon pricing strategy.

- **Obtaining buy-in from the company’s leadership** – Establishing an internal carbon price requires support from company executives. Some companies may not have the leadership in place to pursue an internal carbon price.

- **Deviation from standard accounting methods** – This practice may cause a shift from standard accounting practices, especially if it’s set up as a real price. Therefore, it’s important to engage the finance team early on to understand the accounting implications and how they can be overcome.

Who should you talk to next?

- Leverage public Carbon Disclosure Project (CDP) Report data and analysis. This information can help you identify peers’ carbon pricing activities and RILA may be able to connect you with the right person at another company to discuss more.

- Discuss the concept internally and find champions from your finance and executive teams to help you make the case.

- Speak with your government affairs team, local government staff, and non-profits to learn if a carbon policy is being considered in the jurisdictions in which you operate, and utilize resources such as the World Bank’s State and Trends of Carbon Pricing report to learn about existing policies.

**Internal Carbon Price**

<table>
<thead>
<tr>
<th>Internal carbon price ($/ton of CO₂e)</th>
<th>Example company sources of emissions</th>
<th>“Charge” determined proportional to emissions</th>
<th>factored into investment decisions</th>
<th>Reinvested in carbon-reduction projects ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Electricity</td>
<td></td>
<td></td>
<td>OR</td>
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<tr>
<td></td>
<td>Transportation</td>
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<td></td>
<td>Supply Chain</td>
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</table>

This material is based upon work supported by the Department of Energy, Office of Energy Efficiency and Renewable Energy (EERE), under Award Number DE-EE0007062.
A capital investment fund is a special budget that companies replenish annually to finance energy efficiency projects across their portfolio. Capital investment funds are designed to achieve company-wide energy and carbon reductions while also delivering a net profit for retail stores, which retain the energy cost savings generated by individual projects. This differs from real price carbon funds and revolving loan funds because it deliberately incentivizes retail stores to propose energy projects, whereas other funds rely more heavily on a company’s energy team to identify and carry out projects.

Why should you use it?

- Your company wants to foster a competitive environment in which its stores actively seek maintenance and efficiency opportunities because the fund allows them to retain the cost savings for store operations.

- Your company wants to free up bandwidth for the sustainability or energy team, as the responsibility to identify and implement energy projects can be shared with store managers and/or store operations teams.

Who else is using it?

The adidas Group greenENERGY Fund is one example of a capital investment fund. The fund was created in 2012 to accelerate carbon reductions, attain and verify energy and cost savings, as well as document and share best practices across all facilities. Individual adidas sites submit applications for efficiency projects to the company’s Finance, Engineering, and Corporate Real Estate Steering Committee, which evaluates applications based on their projected impact on the entire portfolio of projects. Adidas’ fund set a portfolio level goal of 20 percent Internal Rate of Return (IRR), allowing projects with lower returns to be pursued as long as they were balanced by projects with high returns. Since 2012, the fund has invested $5.5 million in 49 energy efficiency and renewable energy projects, and forecasts an IRR of 33 percent across the project portfolio.

What are the advantages?

- **Projects increase store profitability** – Energy cost savings generated by efficiency projects reduce stores’ operating expenses and thereby increase their operating budget.

- **Fund structure allows project diversity** – The fund can be designed to enable the company to pursue deeper retrofits that have greater long-term benefits and longer paybacks. These larger projects can be counterbalanced by smaller projects with faster paybacks to achieve a portfolio-level goal.

- **Incentivizes stores to engage in energy efficiency** – Store managers and operations personnel are incentivized to identify efficiency opportunities and apply for funding, which will not only increase the number of proposals, but could also lead to more creative project ideas. Further, applicants have a sense of ownership and accountability, which makes them more likely to submit strong proposals.
What are the downsides?

- **The fund is capitalized annually** – The fund must be replenished annually by an allocation of corporate funds. Annual capitalization should be $1 million or more in order to have a significant impact on the company’s energy and sustainability goals.

- **Obtaining buy-in from the company’s leadership** – Establishing a capital investment fund requires support from company executives. Some companies may not have the leadership in place to pursue a capital investment fund.

Who should you talk to next?

- Work with your energy team to determine if there is existing budget to establish a capital investment fund.

- If the existing budget is insufficient, talk to your finance department to determine if there is money available to capitalize the fund.

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A revolving loan fund leverages an initial amount of money to fund multiple rounds of energy efficiency projects. Energy cost savings that accrue from the initial round of projects replenish the fund, which can be subsequently used to fund additional projects. As long as the projects remain cost-effective—that is, total energy cost savings exceed upfront investment costs—a revolving loan fund can be used to repeatedly fund projects. This differs from a capital investment fund, because energy project cost savings are used to replenish the fund rather than flowing back to individual stores. Because the fund relies on maximizing energy cost savings, the energy team (rather than store managers or other employees) will likely identify, prioritize, and carry out all energy projects.

Why should you use it?

- Your company can devote only limited initial funding for energy efficiency projects and wants high accountability for project cost-effectiveness.
- Your company wants to make a commitment to energy efficiency that can receive strong internal support and media interest.

Who else is using it?

A number of universities have established revolving loan funds, as described in the Billion Dollar Green Challenge launched by the Sustainable Endowments Institute. For example, Boston University created its Sustainability Revolving Loan Fund in 2008 with $2 million in seed funding. Potential projects are selected by the Director of Energy Administration and Operations as well as the Sustainability Director, and then are approved by the Vice President of Operations. The fund invests an average of $70,000 per project, with an average return on investment (ROI) of 57 percent.

A revolving loan fund can be effective at a retail company. Retailers should determine the appropriate level of seed funding based upon estimated project sizes and savings goals, but $1 million or more is likely needed to have a significant impact on the company’s energy and sustainability goals. Managing a revolving loan fund may require a dedicated employee due to the amount of measurement and verification needed for success.

What are the advantages?

- Prioritizes high ROI projects – Revolving loan funds encourage thoughtful project selection because their success requires strong project returns. Therefore, high ROI projects are prioritized.
- Builds trust with finance team – Because all energy projects likely exceed financial thresholds, this type of fund can help build trust between retail finance and energy departments.

What are the downsides?

- Fund structure is untested in retail – While universities, government agencies, and non-profits have implemented revolving loan funds, they have yet to be publicly used in the retail sector.
Disincentivizes larger projects – Since its longevity depends on energy savings materializing quickly, a revolving loan fund may discourage a company from pursuing larger projects with less defined or longer-term paybacks.

Deviation from standard accounting methods – The structure of this fund may require a shift from standard accounting practices, as energy cost savings from projects are redistributed back into the fund. Therefore, it’s important to engage the finance team early on to understand the accounting implications and how they can be overcome.

Who should you talk to next?

- Work with your energy team to determine if there is existing budget to establish a revolving loan fund.
- If the existing budget is insufficient, talk to your finance department to determine if there is money available to seed the fund.
- Engage the Sustainable Endowments Institute, which has created an implementation guide for Green Revolving Funds.

Revolving Loan Fund
EXPEDITED APPROVAL

Expeditied approval refers to an internal process that businesses can develop to decrease the time needed to review and approve energy projects.

Why should you use it?
- Your company wants to avoid missed opportunities, such as applying for rebates and incentives, due to slow project approval.
- Your company wants to accelerate the rate at which it completes energy projects to more quickly meet sustainability and/or financial goals.

Who else is using it?
To gain corporate support for energy efficiency projects, Kohl’s energy team developed an Energy Finance Strategy that included hiring a financial analyst who conveyed the financial benefits of proposed energy efficiency projects to Kohl’s finance team. Although the analyst reported directly to the finance department, he/she was physically seated with the energy team, allowing the individual to better understand the team’s mission. This setup provided the energy team with more direct access to the chief financial officer and decreased the approval time for energy efficiency projects.

Other companies have taken the approach of partnering with departments responsible for project approval to create project proposal templates. By understanding these teams’ expectations and preferences, energy managers can minimize the back and forth required to explain a project. Retailers that have done this cite many best practices including breaking down financial calculations into their most detailed form and outlining all assumptions for maximum transparency. This approach is also mentioned in RILA's interviews with Hudson’s Bay Company and REI, where they highlight the importance of better communication between finance and energy management personnel generally. Once energy managers have cultivated trust, the finance department becomes an ally.

What are the advantages?
- Expedited approval is an easy sell – Energy projects are well-suited for expedited approval as they reduce operating expenses, help meet sustainability goals, and are highly quantifiable both to estimate savings and measure actual outcomes.
- Improves communication with finance team – Expedited approval can spur greater interaction between a company’s energy and finance departments. This integration can increase awareness of and drive company support for energy efficiency.

What are the downsides?
- Requires trust between energy and finance teams – Speeding up the approval process for energy projects requires either having or developing a high level of trust with the finance department. This trust takes time to develop, and may take several successful projects to build an ideal relationship.
**Speeding up approvals requires staff time** – Depending on the number of dedicated staff and competing priorities, there may be insufficient human resources to expedite the approval of energy projects.

**Who should you talk to next?**

- Consult with your energy team to estimate the extent to which expedited approval will help you reach your energy or sustainability goals.
- Talk with your finance department to determine feasibility of implementation.

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**Expedited Approval**

Integration between energy and finance teams

AND/OR

Faster project approval

More projects completed

Standard project proposal templates
CROSS-DEPARTMENTAL COLLABORATION

Predominantly, cross-departmental collaboration takes two forms:

1. Using maintenance or facilities budgets to incorporate energy efficiency into necessary equipment maintenance and replacement.
2. Identifying projects that other departments are pursuing, which have the potential to save energy, and then collaborating with those departments or sharing budgets to maximize energy savings.

Why should you use it?

- Your company wants to improve communication and coordination between departments and thereby generate broader company support for energy efficiency.
- Your company wants to ensure that energy savings are not overlooked for projects occurring in other departments.

Who else is using it?

Best Buy’s Enterprise Energy Management Team identified an opportunity to reduce lighting energy use and costs across the company’s stores by replacing existing display lighting with more energy-efficient LED lamps. These retrofits also reduced maintenance costs, as LEDs have a longer useful life compared to other lighting technologies and therefore require less frequent replacement. However, as the lighting projects had not been budgeted, the challenge was finding sufficient internal capital to fund the replacements. The Enterprise Energy Management Team worked with store managers, the Procurement and Facilities departments, and third-party vendors to implement the retrofits using existing maintenance funds.

Retail interviewees cited LED lighting as a good example of an energy-efficient technology that can benefit other departments, including Environmental Health and Safety, which is attracted to LEDs’ improved light quality and visibility, as well as Merchandising, which prefers the greater illumination LEDs provide. Retailers also shared other applications of cross-departmental collaboration, such as working with Loss Prevention to limit unnecessary energy consumption when building occupancy is low by aligning security and energy or building management systems (EMS/BMS). Increasingly, energy teams are collaborating with store construction and renovation teams to ensure that store build-outs and retrofits include energy-efficient equipment and design by default.

Moreover, any department purchasing energy-consuming equipment – be it a new interactive in-store display, break room vending machine, or sales associate tablets – is worth engaging to collaboratively explore how new energy loads can be minimized. This not only helps the other department’s business case but also fosters future collaboration and allows energy managers to account for new energy loads that may not otherwise be communicated.
What are the advantages?

- **Easy to implement** – Taps into natural synergies across business units and utilizes already budgeted capital.
- **Improves communication with various departments** – Cross-departmental collaboration will spur greater interaction between the energy team and multiple departments. This integration can increase awareness of and drive company support for energy efficiency.
- **Common practice in the retail sector** – Many retail energy teams already collaborate with other departments to identify and carry out energy projects.

What are the downsides?

- **May lead to inferior project proposals** – Other departments may propose projects that will yield lower energy savings compared to projects that have undergone a more strategic, portfolio-wide vetting process.
- **Projects will be proposed on the fly** – It will be hard to identify which departments will request help from the energy team and also when the projects will occur. This uncertainty could lead to issues, especially if the energy team doesn’t have available budget to carry out additional projects. This can be overcome if the department making the inquiry has sufficient budget to carry out the project.

Who should you talk to next?

- Work with your finance team and executive leadership to train departments to recognize energy efficiency opportunities for future projects.
- Actively engage other departments that might benefit from energy efficiency projects and have available budget.

### Cross-Departmental Collaboration

- **Energy budget (CAPEX)**
- **Maintenance budget (OPEX)**
- **Other departmental budgets (CAPEX)**
- **Finance energy efficiency projects ($)**

*Energy efficiency incorporated into broader set of projects*
ADDENDUM

Summary of Internal Financing Options
### SUMMARY OF INTERNAL FINANCING STRATEGIES

<table>
<thead>
<tr>
<th>Internal Financing Strategies</th>
<th>History of Use Overall</th>
<th>History of Use in Retail Sector</th>
<th>Funding Required</th>
<th>Executive Team Buy-In Required</th>
<th>Time and Effort to Establish</th>
<th>Administrative Effort Once Established</th>
<th>Level of Investment</th>
<th>Potential Impact on GHG Reductions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policies and Funds</td>
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<td></td>
</tr>
<tr>
<td>Internal Carbon Pricing</td>
<td>High</td>
<td>Moderate</td>
<td>No</td>
<td>Yes</td>
<td>High</td>
<td>High, if real price</td>
<td>High, if real price</td>
<td>Low, if price signal</td>
</tr>
<tr>
<td>Capital Investment Fund</td>
<td>Moderate</td>
<td>Low</td>
<td>Yes, ongoing</td>
<td>Yes</td>
<td>Moderate</td>
<td>Moderate</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Revolving Loan Fund</td>
<td>Moderate</td>
<td>Low</td>
<td>Yes, once</td>
<td>Yes</td>
<td>Moderate</td>
<td>Moderate</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Process Changes</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
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<tr>
<td>Expedited Approval</td>
<td>Moderate</td>
<td>Moderate</td>
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<td>Possibly</td>
<td>Low</td>
<td>Low</td>
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<tr>
<td>Cross-Departmental Collaboration</td>
<td>High</td>
<td>High</td>
<td>No</td>
<td>Unlikely</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
</tr>
</tbody>
</table>

- **Level of Investment**: Low, Moderate, High
- **Potential Impact on GHG Reductions**: Low, if price signal, High, if real price