

Barriers to Industrial Energy Efficiency

| Barrier | Description | Ability to Affect? | Potential Program Response |
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| Unaware of opportunities | | | |
| | Customer does not have resources to help them understand energy efficiency opportunities. | | |
| Lacks understanding or is apathetic to the value of energy efficiency | Customer does not fundamentally comprehend or care about the effect of energy use and costs on the business. | Yes | Though this is extremely rare, the program can provide information and education about the value of energy efficiency investment. Case studies/success stories of peer businesses. Program outreach. |
| Lacks internal expertise to identify projects | Facility does not have an expert in-house who can identify and assess opportunities. | Yes | Provide best practice and systems training; provide Practival Energy Management support; provide staffing grant |
| Production systems/processes too complex to assess internally | Need consultant to delve deeper into technical and economic feasibility | Yes, in some cases where industry experts are available | Provide on-site assessment, where possible; identify appropriate consultants/vendors |
| Lacks external expertise to identify projects | Business does not know of an expert consultant or vendor who can help them identify and assess energy efficiency opportunities. | Yes | Identify appropriate consultants/vendors; provide co-funding of study. Shared Energy Expert for associations or other similar-mission organizations, such as municipal wastewater facilities. |
| Low Management Priority | | | |
| | Customer is faced with higher-priority, alternative investment needs or opportunities. | | |
| EE seen as unnecessary investment | Management does not see need; may believe operation is already energy efficient | Yes, if management can be convinced of the value of energy efficiency | Show the value of energy efficiency to the decision-makers, emphasizing cost-savings. |
| Not seen as production-related | Management only considers investments that improve production. | Yes, if management mindset can be changed to consider energy impacts | Sell the proposed energy efficiency project to decision-makers, emphasizing cost savings. |
| Decisions based on payback/ROI push energy projects down | Energy efficiency projects have lower capital priority and must compete with other projects for limited capital | Yes, if payback/ROI can somehow be reduced to fit under company threshold. | Provide incentive to reduce payback/ROI. Or, in some cases, providing a "tickler" incentive can pique the interest of decision-makers to take the "money on the table". |

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| High Technical Risk | | | |
| Project may involve potential technical threats or a high degree of uncertainty. | | | |
| Threat to production | While a measure may save energy, installing may create delays, stoppage, or other impacts on production or product quality. | Maybe. Without knowing for sure, an energy efficiency measure may not actually impinge on production. | Provide case studies/success stories where measure has been implemented in similar application. Provide support for a feasibility study to determine what impact on production may occur. |
| Threat of not achieving projected savings | Uncertainty about a new or emerging technology or about its application to the specific facility or process may make the risk insurmountable. | Maybe. A new technology may or may not | Provide case studies/success stories where measure has been implemented in similar application. Provide support for feasibility study to determine what impact on production may occur. |
| Lack of internal expertise | Difficulty in identifying opportunities, quantifying benefits and costs, and/or understanding vendor proposals | Yes, if external expertise can be brought in, either by a program or other consultant. | Provide targeted assessment of opportunities by Program expert. Provide support for study of opportunities such as through a Project Assessment Incentive. |
| High Financial Risk | | | |
| Project may involve a high level of financial uncertainty. | | | |
| Realized savings may not meet projected savings | Estimate savings for project may be either uncertain or bound by uncertain parameters, making the project unreliable for investment. Market demand may also change, affecting projected savings benefits. | Maybe. As with the "threat of not achieving projected savings", above, sufficient preliminary investigation may reduce financial risk enough to overcome. | Provide support for a feasibility study to provide a more precise estimation of energy savings and cost impacts. Offer a guarantee of energy savings. |
| Payback/ROI too long or marginal | Project cost may simply be too high to allow for a suitable payback/ROI. | Maybe. If the payback/ROI can be reduced to a suitable level. | Provide financial incentive to reduce payback/ROI to a suitable level. |
| Payback/ROI does not meet company threshold | While the payback/ROI may be reasonable, the project may not meet internal threshold criteria, especially when competing with other investment options with better payback/ROIs. | Maybe. As above, if the payback/ROI can be reduced to meet customer threshold. | Provide financial incentive to reduce payback/ROI to a level acceptable to customer. |

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| Requires Too Much Time | | | |
| Customer has other priorities and/or insufficient resources to adequately manage energy usage. | | | |
| Lack of internal expertise | Project manager may have insufficient time to learn about the energy efficient option. | Maybe. If customer is willing to accept the judgment and recommendation of an external expert, without giving up valuable time. | Encourage customer confidence in the value of an external expert and provide a list of recommended experts. |
| Lack of time to develop/manage projects | Even if capital and technical understanding exist, a company may feel that it must dedicate all of its staffing resources toward production, assigning lower priority to energy efficiency improvements. | Yes. If the customer is willing to engage in projects, but cannot manage the project themselves, program resources may help bring capacity. | Provide a "staffing grant/incentive" to manage the company's projects. |
| Poor Timing for Project | | | |
| Available services (technical support or incentive) may not fit a customer's scheduling requirements. | | | |
| Construction schedule | Project decision is time-sensitive, dependent on the facility's annual construction cycle or a project's installation schedule. | Only if intervention can be done before bidding while there may still be opportunity to affect design. | Inform and educate customer of program resources when plans are being developed, before the final plan and bidding begin in order to facilitate incremental improvements in the original plans. |
| Budget approval cycle | Project decision is time-sensitive, dependent on the facility's annual budget development and approval cycle. | Only if the customer is aware of program opportunities and project options in time to finalize budget requests. | Program representatives can keep informed about the customer's budget cycle in order to proactively advise the customer of energy efficiency opportunities that may be added to any proposed projects. |
| Business conditions | Business may be undergoing merger, acquisition, litigation, downturn in specific market | Yes, but only in special cases where reducing energy costs may be a significant benefit to offset negative market conditions. | Program can support paying for energy efficiency projects with incentives. |
| General economy | Conditions in the overall market make it difficult for any company to make seemingly risky or unnecessary investments. | Not very much (note "Great Recession" 2008-2012. Some industries, including food and healthcare, continued to thrive. | Continue program support for customers who can "ride out" the recession. |

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| Compliance Risk | | | |
| Environmental | Doing a project may force a new compliance under EPA, OSHA, or other rules, causing customer hesitation. | Maybe. Typically, an energy efficiency project reduces emissions and should contribute to compliance. However, other circumstances may cause higher compliance requirements. | The program can try to work with the customer to find a solution that accommodates. |
| Health/Safety | See above. Also, installation of the proposed project may represent a safety or health risk to installers or employees, requiring higher insurance costs. | Maybe. If assurances can be given by the equipment vendor that no additional health or safety risks will accrue. | This needs to be a decision between the customer and vendor, as to which risks each is willing to bear. The program should not willingly enter into a project where excessive health and/or safety are known to exist. |
| Difficulty in Program Participation | | | |
| Unaware of program | Energy user does not know about or understand available services. | Yes. Program representatives can contact the customer. | Program representatives inform and educate the customer regarding available program resources. |
| Administrative Hassle/ Program Complexity | Program processes and/or paperwork make it difficult to participate in the program. | Yes. In most cases, program representatives can often simplify program participation. | Program support may be able to improve understanding and/or reduce paperwork burden through discussion and direct assistance. |
| Does not know how to contact | Customer would like to get support, but does not know where to go for assistance. | Yes. | Through various media, the program can provide information that the customer can use to contact the program. This includes mass media, social media, email, direct mail, and website. |
| No Program to serve the customer need | The customer needs a type of support that is not currently being provided by a program. | No. | Policy and/or program changes to include new services to deal with the need. |