

Overcoming the Chicken and the Egg Conundrum: Two Regional Successes in Addressing Market Barriers for Energy Efficient Lighting Technologies

Sara Van de Grift, Wisconsin Energy Conservation Corporation

Gabe Arnold, Efficiency Vermont

Liesel Whitney-Schulte, Franklin Energy

Dan Gaherty, Efficiency Vermont

ABSTRACT

Achieving market transformation involves many facets; one of the most important is product availability in the region. If targeted products are not readily available in the marketplace, market transformation efforts are unlikely to succeed.

Historically, efficiency programs have lacked the market power to influence nationwide manufacturers or retailers. In addition, short term programs, unstable funding and limited focus often made it difficult for efficiency programs to influence local market supply. This left programs facing the age old quagmire: which comes first, the product or the demand? Facing this chicken and egg conundrum, most programs have often decided to focus efforts on the two ends of the market chain, manufacturers and individual retailers. However, a critical layer of overlooked players exists in the middle of the chain — the regional buying groups, distributors and advertising groups. These mid-chain entities can make or break a technology's adoption in the market and thus can make or break an efficiency program's success.

This paper discusses two organizations' experiences implementing unique and successful market based approaches to lighting. Efficiency Vermont and Wisconsin's Focus on Energy have both developed programs that work with that critical layer of players in the middle of the market chain. Both programs have found that working with these "middle" players can impact regional product availability far more than can be achieved by working with individual retailers or with the national manufacturers. With this approach, both organizations have seen changes in availability, awareness and market acceptance of commercial lighting technologies.

Introduction

Market transformation entails working with the entire distribution chain for energy efficient products and services in order to stimulate demand through increased consumer awareness while simultaneously increasing the availability and marketing of targeted products on the supply side. Market transformation efforts by the energy efficiency community have historically focused on creating awareness and market pull by end-use consumers. Large scale, sustainable improvements in the marketplace can, however, be achieved more efficiently through concurrent efforts to provide key market providers (i.e. manufacturers, wholesale distributors, retailers, installing contractors) with incentives designed to overcome supply side barriers to increased investment in marketing targeted products.

It is critically important for efficiency programs to understand how market providers at each level of the distribution chain conduct their businesses and where the barriers to increased investment in marketing energy efficient products and services lie within the distribution chain. Armed with this information, program managers are better equipped to determine where within

the distribution chain to target program efforts to have the most influence. Many past programs have focused on the far ends of the market chain, either by attempting to work with the manufacturer or high level retailer corporate offices, often facilitated by national programs like the ENERGY STAR, or by working at the local level with individual end-use consumers. Unfortunately, these efforts are often wasted, as critical barriers to market transformation exist at other junctures in the distribution chain. Partnering with a motivated manufacturer and distributor may not be fruitful if there does not appear to be value in the product or service for retailers or for the ultimate consumers. For example, many manufacturers are anxious to move T5 fluorescent technologies into the market, but penetration is still low due to the limited acceptance in the market by distributors and contractors who have anecdotally told program staff that they see no value in promoting a newer technology that may be harder to purchase and less familiar to the end user and their maintenance staff. Conversely, if some consumers, usually early adopters, demand a product that does not offer the promise of profit for manufacturers (unless sold in large enough volume), the manufacturers have no motive to deliver it. In other words, it is difficult to get the egg without the chicken and you can not get that chicken if you do not have the egg. For these reasons both Efficiency Vermont and the Wisconsin Focus on Energy program began on paths that concluded in the middle of the market, finding a point in the market channels in Vermont and Wisconsin that proved to be the tipping point for program successes.

Efficiency Vermont Rewards from a Market-Based Approach

Since 2000, Efficiency Vermont (EVT) has performed the role of Energy Efficiency Utility (EEU) across the State of Vermont under a performance based contract with Vermont's Public Service Board. For a pre-negotiated contract sum, EVT is obligated to meet specific resource acquisition (kW and kWh) and other performance requirements. Approximately 40% of Energy Efficiency Charge (EEC) funds are returned directly to customers in the form of incentives that are designed to offset the cost of any premium associated with energy efficient equipment. EVT is also committed to introducing leading edge technologies to both end-users and strategic partners in order to maximize the capture of energy savings potential. In 2004, EVT introduced a market-based approach that fosters a greater understanding of the supply chain from manufacturer to consumer with a focus on the identification of barriers to the sales and installation of energy efficient equipment.

In general, upstream market actors perceive a partnership with EVT as a business advantage. On the other hand, they may also consider the introduction of leading edge energy efficient products as a risk. This section of this paper will focus on EVT's efforts to capitalize on the inherent competitive nature of the commercial lighting products market to overcome barriers. EVT is optimistic that through a sustained collaboration with strategic partners, an increasing amount of above-average efficient lighting equipment installations that maximize energy savings potential will occur in Vermont, contributing not only toward meeting near-term energy related contract requirements, but also lead toward long-term environmental benefits.

Understanding the Markets-Side

Initially, EVT committed a significant portion of its resources toward a very specific, project-focused approach. Considerable time was spent on individual energy efficiency projects without gaining a thorough of understanding of how and at what point strategic partners became

involved. This included any number of market actors associated with a particular project, i.e., architects, engineers, contractors and suppliers.

This single-track business model allowed for limited market intervention since it often placed EVT into a reactive mode of evaluating a particular project when design and/or construction was either underway or mostly complete. Due to limited efficient product availability, full savings potential often went unrealized. In an effort to increase upstream influence, EVT made a commitment to a more markets-based model early in 2004. EVT has introduced Business Development Specialists, Retail Account Managers and a Market Coordinator to establish solid relationships and to open lines of communication with strategic partners, including architects and engineers, manufacturer's representatives, vendors and contractors.

An excellent example of the merits of this approach can be seen through our intervention in the lighting equipment market in Vermont. Considerable effort has been placed on inserting ourselves into the lighting supply network to identify the various players (from manufacturer to local supplier), their inter-relationships, product lines, product preferences, geographic range, etc. This business strategy has proven to be very effective for EVT due to the relatively small nature of our state and a manageable number of upstream market actors. The *Evaluation of Efficiency Vermont Business Programs* (Kema Inc., RLW Analytics 2006) performed on behalf of the Vermont Department of Public Service (VTDPS) stated: "EVT's strategy of strong personal representation in marketing has yielded high rates of participation."

Sales of energy efficient commercial lighting equipment have become an increasingly collaborative effort between EVT and market actors. EVT is gaining considerable credibility as a technical resource through this effort as an awareness of new, higher efficiency technologies is introduced to strategic partners and the value that these projects bring to their business. The VT DPS report further stated: "Contractors and suppliers both report that EVT has influenced them to increase the frequency with which they recommend, specify and sell energy efficient equipment" (Kema Inc., RLW Analytics 2006).

Our success can be attributed to an increased comfort level on the part of market actors to share detailed, confidential information with EVT. In particular, the increased knowledge of the various intricacies of the supply chain has allowed EVT to plan for and react to challenges in product availability at the local level.

Dissecting the Supply Chain

Efficiency Vermont has expended considerable effort to understand how product moves from individual lamp, ballast and fixture manufacturers through regional distribution channels and ultimately to local suppliers. In order for EVT to effectively intervene in these markets, a significant amount of research has been performed to acquire this intelligence. Through regular contact at the national/regional manufacturer level, EVT remains current with leading edge energy efficient technology as it is introduced. Through its base of local distributors, EVT then monitors in-state availability of these products.

Because of the intense competition for market share in the lighting equipment business, vendors are eager to be the first to have timely availability of product and thus gain market share. Yet, players throughout the supply chain are naturally reluctant to participate in risky innovations and be caught holding inventory that does not sell. This is where EVT is concentrating its efforts to overcome these barriers. EVT is intervening at a variety of levels to shift stocking patterns and *pull* the market forward. This investment of resources dedicated to acquiring an

understanding of the multiple levels of the supply chain is beginning to yield measurable results and to initiate true market transformation in the commercial lighting market in Vermont much more rapidly than if left to tradition.

An Example Using the High-Performance T8

High-Performance T8 Lighting (Consortium for Energy Efficiency 2006), often called Super T8, is a newer T8 technology that provides increased energy savings and often longer lamp life than standard T8s. It is a more efficient T8 ballast combined with a more efficient T8 lamp offering up to 20% energy savings versus a standard T8. Given the strong importance of T8 lighting for any program promoting energy saving efforts with businesses, this is the technology that Efficiency Vermont would target as a “go-to” technology to save energy with the business market. Efficiency Vermont soon found out that the High-Performance T8 was the first commercial lighting technology in which it was forced to take a hard look at the question: which comes first, the product or the demand? To understand why Efficiency Vermont faced this question, it is important to understand the High-Performance T8 technology as it relates to lighting fixture market, as well as understanding the lighting fixture market itself.

The T8 Lighting Fixture Market

A T8 lighting fixture is typically shipped with what is called a generic electronic ballast (GEB). Most major ballast manufacturers offer both GEBs, as well as high-performance ballasts within their product lines. The GEB is typically the least efficient T8 ballast, while the high-performance ballast is the most efficient. The manufacturers of the ballasts are different from the manufacturers of the fixtures.

When a fixture is ordered from the manufacturer, the manufacturer of the ballast is rarely specified. Which manufacturer’s ballast ends up in the fixture usually depends on what partnerships the fixture manufacturer holds with a particular ballast manufacturer, or often which ballast they were able to obtain at lowest cost. If a particular ballast is ordered with a fixture, such as the high-performance ballast, it becomes a special order fixture. Special order fixtures result in lead times of two to sixteen weeks, often averaging eight weeks. Therein lies the problem. Only “pre-engineered” and “planned” projects are prepared to wait for this lead time. Even if projects are pre-engineered with a planned construction schedule, the contractor has often not planned for the extended lead time. Because of this lead time, the High-Performance T8 ballast becomes essentially unavailable for a significant portion of the overall lighting market. As a result, many engineered projects, most design-build projects, many tenant-fitups and most contractor-driven projects do not have the High-Performance ballast as an option for their projects. Given dominance of design-build and contractor-driven projects in Vermont, this presented a huge potential problem for Efficiency Vermont in meeting MWh and Small Business participation targets.

The two to sixteen week lead time results because a special order ballast must be placed in the fixture at the fixture manufacturer’s factory. Because the order must make its way all the way back to the factory, worked into production, installed, and then shipped through distribution, the result is a long lead time, typically two to eight weeks. However, there are often other factors which extend the lead time to as much as sixteen weeks. Like many industries, there has been a general movement of some lighting manufacturer’s factories to other countries. Because fixtures

must then be shipped through customs, the lead time is lengthened. Furthermore, if the fixture manufacturer does not have the specified ballast on-site at their factory, it must be ordered and shipped to the factory before it can be installed in a fixture.

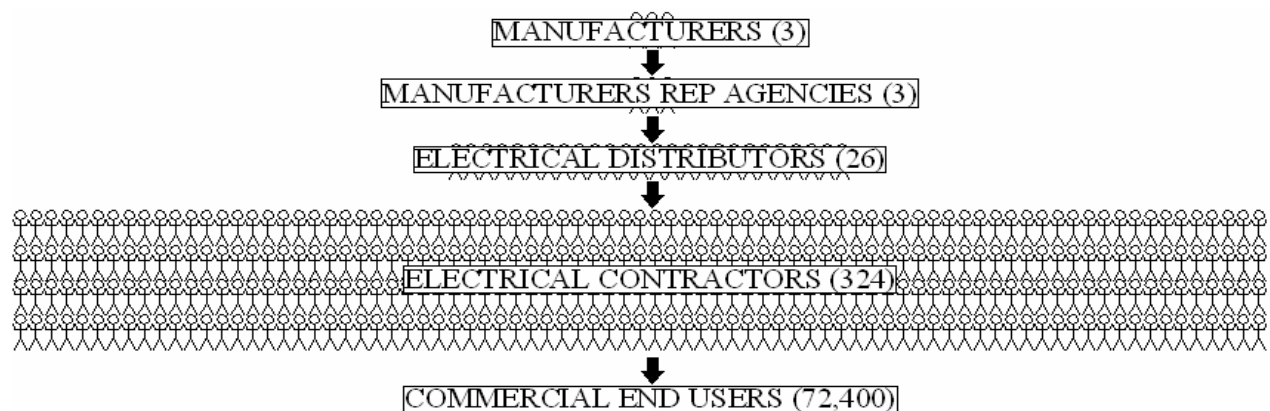
Fixtures that are not specially ordered are normally sent from regional distribution warehouses throughout the US where the fixtures are pre-stocked or purchased from stock directly at a local electrical distributor. If a fixture is sent from a distribution warehouse, the lead time is typically one day up to one week. Often the fixtures that are on the shelf at the electrical distributors are also the fixtures that are stocked at the distribution warehouses.

A single distribution warehouse will often serve a very large geographic area. For example, one manufacturer's warehouse in Pennsylvania provides fixtures for the entire Northeastern United States. A manufacturer will typically stock most of the most common fixture types at these distribution warehouses, including troffers, wraps, industrials, strips and high-bay fixtures.

If it were possible to get fixtures at the manufacturer's distribution warehouses stocked with the high-performance ballast, the lead time problem would be solved. Electrical distributors could obtain the fixtures to stock on their shelves, or obtain them within one week. This is the problem Efficiency Vermont faced with product availability. The fixture manufacturers would not stock High-Performance T8 fixtures at their distribution warehouses without demand already in place for them.

When there is a need for a new light fixture in a business, the order is most often placed by an electrical contractor through a local electrical distributor. The electrical distributor then places the order with a regional manufacturer's representative, who then places the order with the manufacturer at the factory. The manufacturer's representative is often a private agency, representing several non-competing manufacturers. Moving from manufacturer down through the supply chain to the end-user results in exponentially more market players (see Figure 1).

Figure 1. Vermont Commercial Lighting Fixture Supply Chain



It is important to note that the lighting fixture industry is dominated by four large conglomerates made up of hundreds of small companies, so there will typically be approximately three or four major manufacturers, and manufacturer's representatives, who provide fixtures for most of a regional market. In Vermont, there are three (3) major manufacturers who supply a majority of T8 fixtures to the commercial market, and thus three (3) regional manufacturer's representative agencies. Moving down the chain, there are twenty-six (26) commercial electrical

distributors, three hundred and twenty-four (324) licensed electrical contractors, who ultimately serve seventy-two thousand four hundred (72,400) business owners. Using this model, the importance of the manufacturer's representatives and electrical distributors in the middle becomes very apparent. These middle market players play an important role in what technologies are stocked at distribution warehouses and electrical distributors, and thus what technologies are available to a regional and local market.

Competition as a Market Transformation Tool

Competition between businesses can be a powerful market force. If a business does not respond and adapt to competition – by changing their model, improving their offerings, delivery, or price – they risk going out of business. What one might not realize is that this powerful market force can be leveraged as powerful market transformation tool. When competition is leveraged effectively, it can be the tool which can help to change an entire market. When not accounted for, it can be the factor that will stop a market transformation effort dead in its tracks. In many ways, in working with competitors, if you can get one to do it, the rest will follow. This is an important strategy used by Efficiency Vermont in working to address product availability with middle market players.

Leveraging Competition with Electrical Distributors

In 2004, Efficiency Vermont first approached ally commercial electrical distributors in Vermont. As stated earlier, there are twenty-six of these electrical distributors, and only six of these twenty-six would be considered true ally distributors. An ally distributor is one that champions energy efficiency and regularly participates in rebate programs more so than their competitors. Efficiency Vermont approached these ally distributors to ask them to bring in a stock of High-Performance T8 fixtures to supply the demand in the market that Efficiency Vermont would create. The stock that would be brought in would be limited. It would have to be specially ordered, as manufacturers are not stocking High-Performance T8 equipped fixtures within their distribution warehouses. It would also need to be in a low quantity, as electrical distributors do not have a tremendous amount of storage space. This was a great first start, and gave Efficiency Vermont customers a place to go to obtain the High-Performance T8 equipped fixtures.

Ultimately, this would not be a long-term solution. Given its limited quantity, the fixtures would not be a solution for larger projects. Furthermore, it did not account for the strong business relationships that existed in the lighting market. Contractors often have business relationships with certain electrical distributors, and if only six of twenty-six distributors were supplying High-Performance T8 equipped fixtures, the contractors with relationships with the other twenty distributors were unlikely to begin buying from another distributor unless they were forced to do so. This would be a point of contention between Efficiency Vermont and some electrical distributors, but it was a strong start. Perhaps most important, it leveraged the power of competition. Over the course of 2004, Efficiency Vermont would rebate over 2,000 High-Performance T8 equipped fixtures sold through these six ally distributors. Slowly but surely, the six ally distributors gained new business because they were the only place to go to get rebate eligible fixtures for Efficiency Vermont programs. This had two important effects. First, the other twenty distributors slowly began to lose some projects because they could not provide the

High-Performance T8 fixtures in a reasonable amount of time. At first they would complain to Efficiency Vermont that the High-Performance T8 was not yet available to the market and thus it was too early to be promoting. However, ultimately their complaints would be directed upstream, at the manufacturers and manufacturer's rep agencies, who could not supply them the High-Performance T8 equipped fixtures and this was causing them to lose business. The second important effect of rebating 2,000 fixtures through the six ally distributors is that it would begin to make the case that there is demand for this technology within the Vermont Market.

Leveraging Competition with Manufacturers Representative Agencies

In 2005, Efficiency Vermont moved further upstream in their efforts. As stated earlier, the ultimate solution would be to have manufacturers stocking High-Performance T8 equipped fixtures in their regional distribution warehouses. Doing so would make the technology available to electrical distributors to stock on their shelves, or make the technology available to be delivered from the distribution warehouses within one day to one week, solving the availability problem. Because manufacturer's representatives play a strong role in determining what fixtures are stocked in the regional distribution warehouses, this is where Efficiency Vermont would focus their new efforts.

Given the dominance in the lighting industry of three large fluorescent fixture conglomerates, there were essentially only three manufacturers and manufacturer's representative agencies to be approached. These three manufacturers and their agencies supply a large majority of the fluorescent lighting fixtures sold within Vermont. Efficiency Vermont approached these manufacturer's representatives with the goal of getting all three to stock High-Performance T8 equipped fixtures in their distribution warehouses. Resistance to stocking was very strong from two of the three manufacturers and their representatives. They did not feel that the small demand created by Efficiency Vermont in a small state like Vermont warranted stocking of the fixtures in the distribution warehouses. However, one of the three manufacturer's representative agencies did agree to stock them. Why did this one agree? It is known that this manufacturer held the smallest market share in Vermont. It is possible that this manufacturer agreed to stock the fixtures because they felt they could increase their market share and gain new business by being the manufacturer who could provide the High-Performance equipped T8 fixtures quickly to the Vermont market. This is yet another example of leveraging competition to transform the market.

Throughout 2005, this one manufacturer and manufacturer's representative agency would gain some new market share. As the two other manufacturers began to lose business, it would catch their attention as well. Over time the two other manufacturers would change their position on the High-Performance T8 technology, and by May of 2006, both were stocking High-Performance T8 fixtures in their distribution warehouses to avoid losing additional business. Competition is what ultimately made this happen.

Looking Ahead in 2006

2006 presents itself as an exciting year for Efficiency Vermont's commercial lighting program. All three of the manufacturer's representative agencies are now stocking a supply of High-Performance T8 equipped fixtures in their distribution warehouses. Even better, one of the three manufacturer's representative agencies met with Efficiency Vermont in late 2005 to

anticipate what lighting technologies would be rebated in 2006, so that they could align their stock in their distribution warehouses to meet the demand. This included much more than just High-Performance T8 fixtures; it also included T5 equipped wraps, troffers, indirects, industrials, strips and even insulated-ceiling-rated ENERGY STAR[®] cans for the ENERGY STAR Home Program. Furthermore, based on the High-Performance T8 experience in Vermont, the New York Energy Research and Development Authority (NYSERDA) submitted a federal STAC grant application on behalf of Northeast Energy Efficiency Partnerships (NEEP) to address High-Performance T8 availability throughout the Northeast. The grant was awarded in early 2006 and the work is currently underway. In what might perhaps be the “kicker” that helps create enough demand for total market change, in July of 2006, Massachusetts rebate programs will no longer rebate standard T8 technology and will only rebate High-Performance T8 technology. In 2006, efficiency programs throughout the Northeast will be working together through Northeast Energy Efficiency Partnerships (NEEP), utilizing the federal grant, to ultimately transform the northeast market to High-Performance equipped T8 technology. In most cases, the entire Northeast region is served by a single large distribution warehouse for each manufacturer. The ultimate goal will be to replace the standard T8 technology within these warehouses to High-Performance T8 technology, thereby transforming the market.

Wisconsin Focus on Energy Background

The Focus on Energy (Focus) program was established at the statewide level in 2001 as a result of Public Benefits legislation in the State of Wisconsin. The goal of the program is to achieve direct energy savings (kW and kWh) and energy efficiency market impact. Focus programs have a strong market component and strive to change the entire market for particular products and services so that ultimately, consumers will demand and the market will deliver these on routine basis. While some of the programs offered through Focus had a strong market component early on, others programs did not. Commercial Lighting had often been overlooked and considered a “transformed” market, so due to limited resources, little effort was paid to those channels in lieu of markets that seemingly needed more attention. This strategy was re-evaluated based on the success achieved by piggybacking the commercial lighting effort on the residential lighting program through an instant Cash-Back Reward promotion on compact fluorescent bulbs. This market based program, delivered in partnership with manufacturers and retailers throughout the state, saved business customers 22,750,000 kWh in one four-month window, and led to inquiries from distributors and manufacturers regarding the availability of similar programs for the commercial market. It was at this point that Focus decided it was time to have another look at the opportunities within the commercial lighting channel.

Program Efforts

The success of the market channel approach to residential lighting caused the Focus team to contemplate whether a similar approach could help increase the incidence of efficient lighting equipment installation in commercial and industrial buildings where there was a huge potential. (The 2005 study *Energy efficiency and Customer-sited Renewable Energy: Achievable Potential in Wisconsin* completed by the Energy Center of Wisconsin, indicated that 45 % of the overall kWh savings potential in the state is in the area of lighting upgrades, confirming the Focus team’s hypothesis.) In addition, 51% of commercial lighting electric savings were already

coming through the market as a result of the tandem effort with the residential CFL program. Despite this, there had been no concerted effort to look at a market based approach for delivery for Business Programs. As this approach was explored, some key barriers were discovered that needed to be addressed immediately. First and foremost, there was a resource (or lack of resource) issue. Historically, Focus had no staff officially dedicated to commercial lighting at the technology level, choosing rather to deliver all the programs through sectors (commercial, industrial, agriculture and schools and government) staffed by Energy Advisors within each sector. As a result, most efforts were focused on interaction with the end-user. Second, this huge potential lay within a far more complicated market channel, as described below. Finally, the program had a limited understanding of this market and the barriers typically encountered when introducing new, more efficient technologies. The team believed, however, that devoting staff resources and taking a more active and market based approach to commercial lighting could help address some of these barriers.

Once the decision was made to take this approach and the necessary resources had been dedicated, the team broke down the program activities into three categories: 1) understand what was not working about the existing program model; 2) get a sense of the market and the channels, (what did it look like/how did it work?); and 3) figure out where and how the program could have the most influence given limited resources.

What Was Not Working

The program was missing a huge part of the market and potential in the state. A 2006 study of Market Potential done by KEMA, entitled *Focus on Energy Business Programs; Supply Chain Characterization and Baseline Study*, for Focus on Energy revealed that participation among smaller installing electrical contractors was generally low, with only 32% of contractors with 5-24 employees aware of Focus and of that group, only 25% were participating in Focus projects. While specific allies experienced with the program were participating, a majority of the distributors and installing contractors were unaware of the program, or if aware, were uninterested in participating because the program appeared complicated. Many of the program's distributor, supplier and contractor targets did not understand how to help their customers access incentives. In addition to the information uncovered by the KEMA study, program staff also found that there was confusion about other available utility programs in the state.

The existing program was missing the trades – the contractors were not interested in learning about the program because of the perception that it created more work for them with little benefit. They did not have a clear vision of how to use the incentives to help their bid look more competitive. Additionally, they were not receiving information about the program from their usual support network of lighting suppliers and distributors.

As stated above, there was no staff officially dedicated to lighting, despite the huge percentage of program savings from lighting, for two reasons. First, Business Programs Energy Advisors were charged with providing comprehensive energy services, so that promotion of any lighting program was often hit-or-miss, depending on the other opportunities they were working on with the customer. In addition, the program model limited “Trade Ally” interaction to the discretion of Energy Advisor so there was little independent path for distributors, suppliers and contractors to participate. Second, even though a large portion of program savings were attributed to lighting, it was generally considered to be a “transformed” market, and therefore, due to concerns about free ridership, little emphasis was placed on these relationships.

Getting a Picture of the Market

Program administration did not have a clear understanding of the market, how it worked, and the tremendous complexity of how product can be delivered to end-users. Based on this, it was clear that an important first step was to map out how products made it onto the market and how they reached the end-user. Mapping out the lighting distribution channel began with discussions between program staff and lighting market providers from several different levels. Information was solicited from existing “Trade Ally” contacts including lighting manufacturers, manufacturer’s representatives, electrical distributors, suppliers, electrical and lighting contractors, and lighting representation agencies.

Once this map was developed it appeared that the most leverage could be gained by targeting efforts towards the mid-level players. The mid-level players, distributors, specifiers, and regional manufacturer/product representatives, appeared to have the broadest and most frequent touch points with each end of the market. For example, in Wisconsin nearly all products pass through the distributor and these distribution supply houses typically have the closest relationships with installing contractors, making them an obvious target for the program. The mid-level players already knew the market in Wisconsin, knew the Focus program and saw value in working cooperatively with Focus staff to deliver the program to their customers. By targeting them, the program could better leverage their relationships with contractors, specifiers and end-users. In essence the mid-level players became an extension of the program and part of the team. In addition to their influence at the customer level, the mid-level players afforded the team opportunities to take advantage of the close working relationships suppliers/distributors have upstream, with the manufacturers and rep agencies again using their resources as a conduit for promoting the program and the targeted technologies to those responsible for bringing product into the Wisconsin market.

Program Tactics

As a first step, Focus needed to make contact with the larger distribution chains. Through these contacts, it was discovered that information about programs delivered in person to the sales and quotations staffs are more successfully adopted than when information is conveyed only to management. In addition to providing information on Focus on Energy, the team found that it could add value and increase interest by including trainings on specific technologies in the curricula. A common barrier preventing a new technology’s adoption by the market was a lack of understanding by the distributor sales staff and others within the channel making the consumer unlikely to buy and, consequently, the distributor unlikely to stock. When setting up these meetings and distributing information, the program could glean from the distributors details about the types of program offerings and even technologies that were causing confusion. For example, the definition of High-Performance T8 was unclear and many distributors had not received adequate information from manufacturers regarding the different eligible lamp/ballast choices. Focus proposed partnering with manufacturers to offer training on High-Performance T8 systems to distributor staff and their contractor customers. Several joint effort contractor training sessions were scheduled in partnership with Focus and product manufacturers affiliated with each distributor. Partnering with distributors and manufacturers provided a vehicle to convey program and product information with the credibility associated with the existing relationship the contractors have with the distributor. Manufacturers often hold product

information seminars for contractors, but by partnering with Focus on Energy, contractors also received objective, third party information about the product or strategy's energy efficiency value, as well as incentives to help them sell the job to the end-users.

These joint technology trainings also provided an opportunity for the program to begin looking for promotional partnerships and tactics that could better motivate sales staff to introduce new products and demonstrate the potential energy savings benefits to their customers. Distributor and supply house sales staff have historically responded favorably to SPIFFs offered by manufacturers to promote specific products. The theory behind this is that by increasing the margin for the salesperson on a technology you are A) motivating the sales people to learn enough about the system to sell it and making it financially motivating for them to take the leap and offer it to a customer and B) motivating the distributor to work with their manufacturer reps to ensure adequate supply. Focus staff proposed a pilot program designed to increase sales of High-Performance T8 systems that offers a 10% bounty (or SPIFF) on the customer incentive for the sales person. For example: A project that involved retrofitting 200-3 lamp T12 fixtures with 200-3 lamp High-Performance T8 lamp/ballast components would receive a \$2000.00 incentive for the customer and the distributor salesperson would receive \$200.00. Initial feedback is that the SPIFF Program is having impact although final results will not be available until late 2006.

Building on the relationships established between program staff and market players in the lighting distribution channel was another critical piece to this approach. Involvement with trade organizations such as state chapters of the Illuminating Engineering Society of North America (IESNA), National Electrical Contractors Association (NECA), National Association of Independent Lighting Distributors (NALD), National Association of Lighting Management Companies (NALMCO) and International Facility Management Association (IFMA) demonstrates that Focus on Energy is an important resource for the distribution channel for energy efficient lighting products and is a resource to members of these organizations. By aligning with trade organizations, the team is able to further enhance the lighting program's credibility by promoting the accepted standards for appropriate lighting design including quality metrics as well as energy efficiency. Meeting attendance also affords many opportunities to gain a better insight into the needs and concerns of lighting market players. This leads to improvements in the program's service offerings for enhancing distribution of energy efficient products through existing market channels to truly achieve market transformation.

A final step in this early process was the development of an industry advisory group. Past program participants as well as representatives of each level in the distribution chain including Lighting Certified individuals, manufacturers, lighting specifiers/designers, supplier/distributors and installing contractors were invited to participate. By calling on the market players with expertise and experience in the lighting industry, the team will be able to use their opinions about current and past programs, as well as ideas for future programs, to design programs that will be more readily accepted, easier to access and better aligned with the needs of the lighting industry to promote efficient design.

Early Lessons

While the program is still in its infancy some lessons have already been learned that will, if properly addressed, continue to foster program growth. First, the Focus on Energy lighting program incentive levels are low compared with those of similar programs. In some cases the incentive does very little to offset the incremental cost of the technology. For example, the

incremental cost of replacing incandescent track lighting with Ceramic Metal Halide track fixtures is up to \$125.00 per fixture, yet the incentive is only \$15.00 per fixture. In other cases, the incentive is so low that allies have commented that it is “not worth it” to go through the application process to receive the small incentive. In a few cases the incentive may be so low that many who do take advantage of the offer were already installing the technology causing an increase in free ridership in the program. Recommendations made by the program evaluation team of PA Consulting include adjusting incentives on some technologies upward in order to have a larger impact and decrease the risk of free ridership.

Offerings need to be revised to consider emerging technologies, but also be aligned with market demands. There is a need to examine what other technologies might be market ready, including T5/T5HO, Low-Watt T8 systems, LED spot/flood, and electronic ballast High Intensity Discharge versus what technologies have potential, but may not be quite market ready, such as white LED light sources for general lighting purposes, which have been earmarked by EPACT 05 for additional research and classification, but are not yet efficacious enough to be practical for commercial use.

The program needs to continue to work to better understand who the key market players are and develop partnerships with them to deliver key products or target specific market segments. For example, most key distributors have sales staff dedicated to working with specific market segments such as industrial, hospitality, healthcare, schools and municipalities which align well with target markets being pursued by Focus Business Programs. Working in tandem with the efforts of existing market players (fixture manufacturers, specifiers, distributors) to promote specific technologies to these mutual markets will provide the market players with the credibility of working with an objective state-wide program, and provide the Focus program with cost effective additional outreach into the marketplace.

Program changes need to be made with an ally conscious eye or risk alienating those who best help deliver the program into the market. In some cases this happened, but in the past it was inconsistent at best. For example, in early 2005 the program decided to remove standard T8's from the incentive list. Program allies were given no notice of this change and no chance to provide input towards what other technologies should be considered. When the news went out regarding the removal of the standard T8 via updated reward forms, there was uproar in the market. Allies understood why the decision may have been made, but felt the change and transition was handled poorly and did not consider how the sudden change would impact their customers. It took months of one-on-one conversations with distributors, manufacturers and contractors to gain back their faith in the program.

These first steps and early successes indicate that Focus is inline to reach more of the potential energy savings available in lighting, while at the same time helping develop a longer term infrastructure for efficient lighting in the state. This along with the continuing effort to leverage the potential for increasing activities, partnerships and energy savings at the market level will, in the long term, lead to a transformed market that will be able to deliver energy efficient products and services even in the absence of programs like Focus.

Overall Conclusion

Based on the successes with the more established Efficiency Vermont program and the early results of the Focus on Energy commercial lighting program, it is clear that a market based approach can work for commercial lighting and can indeed result in improvements in the

marketplace. This change can be achieved by ensuring concurrent efforts across the key market providers in the channel that work to overcome supply side, distribution, and end user barriers and increase the adoption of targeted products. In short, trying to focus on just the chicken or just the egg will yield little results but by ensuring you have both the chicken the egg and the proper incubation, effort and attention across the entire channel can result in tangible change and sizable results.

References

Energy Center of Wisconsin (2005). *Energy efficiency and Customer-sited Renewable Energy: Achievable Potential in Wisconsin 2006 – 2015* (Report 236-1). Madison WI. Governor Doyle's Task Force on Energy Efficiency & Renewable

KEMA Inc (2005). *Focus on Energy Business Programs; Supply Chain Characterization and Baseline Study*. Madison, WI.

Kema Inc, RLW Analytics (2006) *Final Report: Phase 2 Evaluation of the Efficiency Vermont Business Programs*, Montpelier, VT

Consortium for Energy Efficiency, Inc. (2006) *CEE High-Performance T8 Specification*, Boston, MA