

Adoption Issues for an Automatic Demand Response Program by a Multinational Company

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ABSTRACT

The process of adopting socially desirable environmental programs is not well understood. Large companies with widely dispersed operations face special difficulties since their familiarity with the local environmental needs may not be complete. These companies may follow socially responsible policies in other areas, but may not understand and support the local environmental needs.

This case study follows the decision process for one such large company – IKEA Corporation USA. IKEA is a multinational company (MNC) whose headquarters are located in Sweden. IKEA has supported environmentally responsible programs internationally, but except for a pilot test they have not participated in an Automatic Demand Response (ADR) in California. This situation occurs despite the belief by California IKEA local managers who were provided with an explanation of the purpose agreed that it was socially desirable and that it follows their overall corporate philosophy of environmental responsibility.

This study examines the limits and possibilities of environmental decision making by local managers of multinational operations such as IKEA managers. Some definitions were provided to general store employees to determine their reaction to a program called “demand response”. The power and authority of local managers to respond quickly to potential social problems is examined. The formal decision making process is explicated and projections about future avenues of approach for environmentally desirable projects are included. This study will provide insight for other socially desirable environmental projects that face adoption difficulties in large, complex organizations. While the main focus is on a MNC, it is expected that any large, complex organization with dispersed operations could benefit from the study.

Introduction

Demand Response (DR) is intended to reduce or shift electricity to improve electric grid reliability and manage electricity costs. Fully automated load reductions in a large number of facilities could increase the availability of DR, decrease costs to initiate sheds, and allow for strategic dispatch (geographical, rotating, or price-based strategies). The overall goal of the "Automated Facility Demand Response" research project is to support increased penetration of demand response (DR) in large facilities through the use of automation and better understanding of DR technologies and strategies in large facilities (DRRC drcc.lbl.gov/drcc-1.html).

The technical portion of the ADR test study was conducted on many types of buildings. One of the test sites for the technical part of the study was a store from the large multinational company, IKEA. Two stores managers were originally contacted and although one did not choose to participate in the technical test study, the researchers were allowed to ask questions

about company policies. So, the technical part of the pilot test included one store, but two IKEA stores were included in the social science portion of the research.

Automatic Demand Response (ADR) is a subset of Demand Response (DR). In an ADR program the load is shed using the building control system after that system receives a signal from the energy provider that a load shed is required. The intention is for the facility to shed a small, non-critical load at peak times and during energy emergencies. The alternative in an emergency could be as great as a complete system shutdown or random rotating blackouts. Additionally, shutting down at peak times will make it necessary to buy power at its most expensive time – during peak times. Overall the socially responsible (SR) effect is that widespread adoption of DR programs will further society wide goals. These goals include lowering overall energy costs and the providing for more reliable power. The effect on the entire energy system could be significant especially if large institutions such as multinational corporations (MNCs) participate.

Large MNCs are an omnipresent influence in the global economy. The rise of this international form of business entity has had unexpected consequences for societies around the world both negative and positive. The negative effects of the globalization have been widely reported. One effect of globalization is that national governments have been increasingly unable to respond to local environmental needs as powerful MNCs enter their territories. There are powerful pressures on governmental agencies to release even more control to MNCs to provide jobs and business opportunities to locals. The structural adjustment programs of the World Bank and the I.M.F. and the global free-trade agreements empowered to override national laws have further weakened governments (Korten 1996).

But multinational companies have also had a positive influence on some social issues; these companies have adopted socially responsible policies without government mandate. This has sometimes come as a surprise to those who oppose globalization. In June 2002, two bills were before the US Congress that would limit the agricultural use of antibiotics. Both bills failed after fierce lobbying by agricultural pharmaceutical companies. One year later and without any governmental action, fast food giant McDonalds announced a policy to reduce and then eliminate the use of antibiotics as growth promoters (Slayers and Whitt 2005). Recent news releases from other MNCs indicate that others have taken steps to make socially responsible changes. Google announced that they would no longer buy eggs for their company cafeterias if the chickens had been raised in cages and IKEA announced that they will only harvest certain categories of tropical lumbers. These are worthy ideas, but how do companies decide which worthy projects to be adopted?

The premise of this research is that some MNCs willingly adopt some SR practices, but there is a competition among SR programs. Google decided upon avoiding eggs produced inhumanely, McDonald's chose antibiotic free chicken. Many socially responsible positions can be taken, but only a few are. "Within the scene of competition [between SR policies], the question is why some social problems are successful in capturing interest and others aren't." (Loseke 1999).

Nora Brownell of the Federal Energy Regulatory Commission (FERC) stated that when Demand Response (DR) was presented to hundreds of DR stakeholders, DR was the only public policy initiative that was supported by everyone (Guidance 2006). She also noted that the gap between actual and potential DR is actually getting larger. This report examines why DR has not had an overwhelmingly positive response despite the clear agreement by most stakeholders that

it is socially responsible. If many stakeholders agree that DR is a good idea, then why is it not adopted when consumers are asked to participate in specific programs?

Previous background interviews by one of these researchers have revealed some interesting observations about DR adoption. Public entities that have an underlying mandate for public service have been more willing to consider DR than private industry. Within the private sector those businesses that appear to be most capable technically (appropriate technology in place and knowledgeable operators on staff) to understanding and implementing DR technologies have been extremely resistant to the programs for business and legal reasons. These resistant participants include multi-tenant office buildings managers and commercial property managers such as professional third party property management companies. The retail industry has been selected for this case study because it appears to be an industry that is closest to having the necessary technology and it does not have the business and legal impediments of multi-tenant facilities. MNC operated retail businesses generally have similar building control systems in each store and they have similar uses of their properties. They also generally outsource the service of these control systems regionally or nationally to one vendor. Their relationships with controls vendors make their controls systems similar across their portfolios which will contribute to ease of adoption. Because some retail companies entirely own and occupy their properties, they do not have the legal and business issues that multi-tenant buildings have.

IKEA is of particular interest for this type of research because it is known for its SR policies and acknowledged as being a forward looking, progressive company in the SR area. IKEA has undertaken to disseminate its SR values throughout the company's regions of operation on a global basis. The company describes itself as a socially responsible company; company literature makes it clear that they are proud of their SR positions on many issues including child labor, tropical lumber harvesting, and global warming. All of these issues have been undertaken with the assistance of a nongovernmental organization (NGO) in a partnership agreement.

This study will provide understanding of how IKEA has conducted SR partnerships in the past. It will also provide an understanding of the social milieu that exists at two American stores as a method of gaining insight into IKEA's values. All IKEA stores in the world conform to certain standards of appearance, performance and SR actions. This means that a small number of stores could provide significant insight to the company's values and actions. This report provides a background study on two IKEA stores in Northern California and information gathered from an interview and documents provided by Swedish managers.

The objective of this research is to explore the present environment toward socially responsible projects by IKEA using employee interviews and a corporate publications review. The report will make specific recommendations for framing the DR issue as a socially responsible position.

Theoretical Background

Social constructions are inventions by a particular group or society that exist solely because people agree to behave as if they exist or agree to follow certain conventional rules (Berger and Luckman 1966). Individuals in modern societies agree, for example, that small pieces of paper are worth an agreed upon amount when one accepts paper currency. Social constructions need not be physical artifacts. Social constructions can involve belief systems such

as religions and human organizations such as governments and corporations. The focus of social construction is to understand how and why individuals and groups participate in the creation of a social reality. As an avenue of approach for researchers, it suggests studying how social phenomena are constructed by humans as a method of determining how they might be changed.

Social problems are a special type of social constructions that are identifiable by their characteristics. People must believe that a problem that is presently occurring is wrong. The problem itself must be widespread; it must affect a significant number of people. To be acknowledged as a social problem, observers must agree that the existing condition should be changed. Getting something defined as a social problem is important to its resolution. Issues that are described as social problems actually have a positive outlook because a problem that is identified as a social problem has the potential to be changed (Loseke 1999).

This research investigates whether framing of DR as technical, economic and business problem is sufficient to encourage its adoption. Loeske suggests that the definition of a problem that is to be considered as a social problem is important. She maintains that to define an issue as wrong, widespread and changeable is a necessary, but not sufficient condition for an action to be described as a social problem. To be defined as a social problem, everyone must agree that it *should be* changed. There are many social issues, for example, global warming, welfare and educational policies, racial prejudice, and medical accessibility that can be described as social problems. Within each of these social problems there are competing concepts to define solutions to that social problem. A primary question important to selecting an SR project for businesses to support is, "Which of these social problems are important?" A secondary question might be, "When many issues are defined as social problems, which of these problems ascend to the level of a social problem that we will expend effort in changing?"

An underlying premise of this research is that increasing DR adoption requires a better fit with the socially constructed reality of potential participants. The goal of this research is to provide an understanding of the methods to encourage managers and leaders at MNCs (especially those in the retail business) to adopt DR as a socially responsible action.

Methods

To study the relationships between SR and DR, information was gathered from IKEA a Swedish furniture store. Although IKEA has operations in many countries, information was gathered only from Sweden and the USA. The information obtained in the USA and Sweden is not parallel; complete access to large companies such as IKEA is not always possible. The information gathered is intended to provide insight into IKEA's SR actions in the past and its probable response to DR if it were framed as a SR program.

Methods -USA

The research in this study was undertaken as part of the Automated Demand Response (ADR) Research project conducted by the Demand Response Research Center (DRRC) in the summer and fall of 2005 (Piette 2005). The technical research team needed test sites to help develop the technology and understand the technical aspects of ADR. As part of that research, several companies were approached as potential technical test sites. Companies were asked to participate voluntarily. There was no immediate financial incentive although the companies

were told that DR programs would likely be offered by their utilities in the future. They were encouraged with the primary reason given that it would help them to understand future DR programs offered by their local utilities.

The IKEA stores were selected for the case study since they represented a large class of possible users of ADR and were seen as likely potential adopters. It is important to know that this social science research was not conducted to determine how IKEA operates generally. The intention was to determine how to package and present ADR as a desirable program that IKEA and other MNCs like IKEA would adopt in the future. The managers and employees were directly asked to speculate as to likely strategies that would be attractive to their companies.

The two stores in Northern California (Emeryville and East Palo Alto) were selected because of their proximity to the research team. The stores have approximately 250,000 square feet of enclosed retail space; both stores have attached or nearby parking structures. They are operated by in-house staff with the assistance of some outsourced services. As is common in that industry, one of these outsourced services is the building energy control services.

The store managers were originally approached by a member of the research team and asked to participate. In both cases the store managers referred the decision to their facility managers and the social science research team worked primarily with the facility managers. The Emeryville facility manager rejected participation, but the East Palo Alto facility manager did participate in the technical study. Even though the Emeryville facility manager did not participate in the technical research, he agreed to be interviewed for the social science portion of the study. Both facility managers suggested that we talk to the accounting managers also. We interviewed accounting managers in the presence of the facility managers.

While conducting the interviews, the researchers gathered in-house publications that store employees would encounter. The stores both have back-of-house areas where employees congregate for meetings and breaks. These rooms have posters and company produced literature that describes the corporate philosophy "IWAY". After reading this literature and reviewing the online IKEA site, it is clear that IKEA Corporation is trying to convey certain cultural values to employees and non-employees; these cultural values include socially and environmentally responsible behaviors.

In the fall of 2005, one of the researchers returned to both stores and interviewed 21 general store employees at each store (a total of 42 interviews) without contacting the management at each store. Without telling the employee what the program entailed, employees were asked to speculate about whether they thought their company would support a program with no more information other than its name. At the first store, general store employees were asked to speculate about what they thought their company's reaction would be to a program named "Demand Response". At the second store, the general store employees were provided a description that used language employees were likely to have seen in their training and corporate literature to describe Demand Response, but did not explicitly use the words Demand Response. Each employee was offered the choice of both names printed on a 4" x 6" card without any explanation of the program's purpose. At each of the two stores, someone from store management approached and questioned the researcher to determine the purpose. The interviews were stopped when the store management was alerted although they did not ask the interviewer to desist.

Methods - Sweden

One of the research team members is located in Sweden. At the time of the original research, his research team was not involved in work with IKEA. His group is now at the leading edge of a multiyear, larger study in which DR may be a minor issue. The researcher was able to ask some questions of the Swedish IKEA managers, but we are concerned that the DR research may be a distraction from that larger project at this time. Consequently, we have not been able to question the Swedish managers as closely as we desire yet. However, we do have some understanding of IKEA's method of evaluating environmental programs in Sweden and some knowledge about DR in Sweden. This information was gathered from an onsite interview and reviewing online literature provided by the Swedish managers.

The Swedish managers provided us with additional IKEA material which described their SR positions. Some information about selecting SR policies and ensuring SR compliance with vendors and employees was included. This material was surveyed carefully to determine if there were models describing how IKEA would be likely to respond to DR programs.

Social Responsibility and Response at IKEA

Background Information, Results of Interviews and Document Survey

Like many retail companies, IKEA has essentially three levels of management. The first level is the store management. Each of the over 200 stores is similar in appearance and managed in a similar way. Understanding how one or two stores operate provides a good understanding of the company's total operation. The second level is the middle management of the stores and provides oversight of stores for compliance with company standards. A major mission of the second level is to coordinate logistics within an area. The top level of the company is located in Sweden. This level provides for store design, layout, fixture plans, marketing, and strategic direction.

IKEA is a multinational company with operational headquarters in Sweden. The corporation is owned by a Dutch holding company, but all operations are conducted out of Sweden. The Dutch company is widely perceived to be a tax move to avoid the high Swedish taxes. IKEA currently has more than 200 stores in 32 countries, including 22 in the United States. The company plans to open about five new stores a year through 2016 (IKEA website). Worldwide, IKEA has nearly 90,000 employees and hundreds of contractors and vendor suppliers.

Founder Ingvar Kamprad has built his international furniture chain into an empire with \$15.5 billion in annual sales. The 80-year-old salesman was named the world's richest man by the Swedish business weekly *Veckans Affärer* last year, pushing Microsoft Chairman Bill Gates into the second spot (Forsberg 2005). The company still bears the impression of its founder.

The company has a recognizable global brand; store designs, store fixtures, and advertising are done almost entirely in Sweden. These choices provide a standard for much of what the public sees at a store. Given their broad geographic distribution and enormous staff, IKEA has developed internal standards for store management and employees.

In the on-site store interviews conducted in Emeryville and East Palo Alto, the researchers were told that the local stores are thoroughly audited each year by internal corporate auditors. This audit is to ensure their compliance with a corporate document called the IWAY

standard. This internal standard was not made available to the research team despite several requests. It is possible that this internal annual audit contains some material that is considered competitively sensitive if it were to be distributed. Employees described the internal store IWAY audit as detailed and thorough. In the interviews, employees mentioned that the store managers are competitive between stores and this competition is thought to enhance the adoption of the IWAY standards. We were able to get a good explanation of the types of items on the standard verbally.

The IWAY standards for stores were not available, but the IWAY overall standards for SR actions are found in an IKEA produced booklet - "Social and Environmental Responsibility" (IKEA Site). This document describes the SR behavior that is desired by the company. It is distributed to employees and it is made available to an interested public. The booklet describes the targeted behaviors that the company wants to encourage or discourage. For example, the document explicitly states that child labor will not be tolerated in any part of its supply chain. The document also provides the company's position on the harvesting of lumber, transportation, and packaging/recycling issues. Interviews indicated that all of these issues are included in the internal IWAY store checklist. This means there are certain measurable standards for packaging/recycling, transportation, child labor and other SR actions that are carefully measured and reported in the annual store audit. This present audit does not contain any language about DR although it does contain language about energy efficiency.

The published material provided by IKEA describes partnership relationships with well known environmental agencies and SR agencies. All of these partnerships are with NGOs who are well known in their area. It appears that the approval of an outside reputable SR agency is desired and sought out for each of the SR programs adopted. The NGO partners are utilized to develop the SR standards that are included in the compliance requirements.

Items on the individual store audit as described by managers have a varying level of adoption. Child labor, for example, is never tolerated. In the area of recycling, the company sets target minimum standards that managers strive to meet. In the absence of a required SR standard, any potential program that costs money is referred to a cost-benefit analysis by the comptroller. In the US stores, environmental cost paybacks were set at 2 years; both stores had examples of environmental fixes that had been considered and rejected with a 2 year or less payback.

Each new employee receives environmental training with regular follow up training. Each store is directed to have a local employee who acts as the environmental coordinator and develops an action plan for recycling, waste sorting, energy savings, transportation and education. DR is not a part of the environmental coordinators responsibility to manage as it is not on the store audit.

The store managers are directed to take SR actions locally by participating in activities to support selected local and regional projects. This general statement may be supplanted by specific and measurable requirements included in the IWAY audit. The audit's specific language dictates what must be done at a minimum. Store managers are competitive and compare their store's performance against their peer stores. The general statement to participate in local activities is not in the IWAY standard audit; therefore, it is unlikely to be measured in the annual store audit. Management efforts are focused first on successfully completing the explicit annual audit requirements.

An example of this can be seen in the two pilot tests. Both the Emeryville and East Palo Alto stores staff were asked to participate in the ADR program. The East Palo Alto store did

participate with the help of the local facilities manager. He said that he had the support of his manager as long as it didn't take too much time and cost too much. The other facility manager did not participate. He gave two reasons for his non-participation in the test. The store manager told him that he (facility manager) should focus on the internal store audit. The facility manager at the Emeryville store also said that he didn't know what Demand Response was when he was asked to participate and so he did not champion it.

As discussed earlier, store interviews with both facility managers and the stores general employees revealed several impediments to California-wide or global participation in DR programs. Managers and employees are unfamiliar with the DR concept and their company has not provided direction on the issue. The stores' employees did not know what term the "Demand Response" meant and they had to be educated about the need for such a program. Unlike the policy of no child labor, recycling as a comparison, no image is conveyed to them by the words "Demand Response". The concept of DR is known within the utility industry and among policy makers; it may have been lost on the program directors that the name is not conveying any immediate meaning to potential adopters.

When one of the researchers questioned 21 employees at one of the Northern California stores employees were asked to identify or describe "demand response" with no other explanation except its name. No employee could discern the purpose for "demand response" from the name. All of the employees interviewed believed that their company would not support "demand response" or didn't know what their company's reaction would be. Several employees mentioned that it sounded like a bad thing to make "demand responses". It is clear that the immediate response to the word demand is its most common English usage, that is, to ask for urgently or peremptorily or to claim something as just or due. The meaning intended is to use the word "demand" as used by an economist – supply and demand. Unfortunately, none of the employees in management or store operations is an economist and the meaning conveyed by the term demand response is not what is intended.

A proposed alternative name was suggested with a second set of 21 employees at the second store using language they were likely to see in their publications - "Cooperative Energy Actions to Help Energy Consumers". Without understanding what this name meant, 19 of the 21 interviewed agreed that IKEA would probably support the concept; two responded they needed more information. The description is long, but the difference is clear. Employees who have received training at IKEA can identify that their company's values might support cooperative actions while none could immediately understand what position their company was likely with "Demand Response". The IKEA literature for other adopted SR programs includes the words: cooperation, energy, action, consumers, and help. When these words are combined even in an unfamiliar context, most employees understood that their company was likely to support that policy.

The facility managers and comptrollers were asked to speculate how to get ADR programs adopted throughout the entire company. Specifically we asked the employees how they thought that DR could be made explicit corporate policy so that employees would seek out DR programs if they were available. Everyone interviewed suggested the same suggestions immediately; if it was their responsibility to comply with DR as a part of the IWAY store audit they would do certainly do it.

The next questions were to ask how the facility managers thought that DR could be brought into the IWAY standard. Although the stores have a US Headquarters, the employees thought that the actual decision to comply with DR programs across the USA was mostly likely

to come from Sweden. Both of the facility managers suggested that it was not only a top level decision, but that they thought that only the president of the company would be able to set this standard. The US Headquarters would be responsible for checking the audit, but in the opinion of the store's employees, IKEA USA would not be responsible for making the fundamental decision to include DR in the annual audit.

The information gathered from Sweden has been helpful in understanding IKEA's overall corporate policy especially that policy on SR. Presently all of the global SR policies including environmental policies are defined in Sweden; therefore, understanding the company in Sweden may help to understand IKEA's SR decisions. IKEA stores are more pervasive in the Swedish marketplace compared with the USA. Although there are nearly equal numbers of stores in the two countries, the size of the US market is much greater. This can be seen in the demographics of the two countries, Sweden's population is 9 million while the US population today is approaching 300 million. Despite the population difference, there are roughly equal numbers of stores in each country. IKEA's management has projected a planned growth of five new US stores each year for the next ten years. This means that the US market and the values of the US population will play an even bigger part in the company's strategic policy in the future.

Like the US, the Swedish energy market is served by a number of utilities (about 100) including municipally owned and regional utilities. Also, like the US, there has been no coherent cooperation among the utilities on the issue of DR. IKEA Sweden is undertaking a full survey of all of their Swedish based stores in 2006-2009 with a goal of 15% energy reduction per store by the end of the project. DR is an interesting issue and may be included although that is not the main thrust of the effort.

IKEA has an overall environmental policy that does influence their decisions. IKEA Groups' Social and Environmental Affairs provides a specific period of time where the strategies, goals, and actions are given. Projections such as the reduction of 15% of overall energy use in the next three years are an example of such a goal. The US comptrollers told us that the paybacks for energy efficiency changes are about 2 years. If it is more than two years, it is not done. However the normal payback the Swedish store comptrollers must meet for any project is normally 3-4 years. For environmentally related projects, this period may be extended to 6-8 years. A successful utility program for the Swedish facility managers is one that meets both economic and environmental goals. Presently the IKEA in Sweden is not participating in any DR programs; IKEA Swedish managers are unfamiliar with DR programs.

Summary of Findings – IKEA USA and IKEA Sweden

Managers at both the US and Swedish facilities are not familiar with DR. They had virtually no information about DR before the researchers presented the ideas to them. They had not previously been approached to participate in a DR program by their utility. Their interviews were conducted with the open purpose of allowing the researchers to understand their company's politics, marketing, decision-making and business practices. They provided insight into the SR policies of the company and informed the researchers that the decision to adopt DR. If DR is treated as an SR policy it will not be done at the store level unless it is mandated from above and it will not be fully implemented unless it is included in their annual store audit.

If DR is not mandated by their top management, then, it could pass through to adoption if it were on a cost payback under two years. The California managers are not presently unhappy with the status quo in energy pricing and are unlikely to further investigate DR programs without

further incentives. Cost paybacks for US environmental projects are shorter than Swedish based projects and will have to meet a higher standard. This will make adoption in the USA harder than in Sweden.

Recommendations for Action

Policymakers in California who wish to extend the adoption of DR policies might have better success with MNCs if they use the following recommendations.

Recommendation One: Define Demand Response to include SR

Demand response is not achieving the goals desired by the US government or energy stakeholders to shed more load at peak periods. This research indicates that DR suffers from poor promotion for the social purposes of DR. Specifically, the definition of what DR is and is attempting to accomplish needs to be refined for public consumption.

There appears to be many definitions of DR depending on whether the concept is considered from the technical, political, economic, business, or social perspective. The definition that is used is very important as to how the program is perceived by potential adopters.

Definitions matter. Words, definitions, and categories are useful shortcuts to help us make sense of the world around us. It is important to understand how the issue is being presently being framed to potential adopters before changes are suggested.

A proposed social definition of demand response, developed for this project, and is unique to its target population is given below.

“Demand response is the idea that we can change the prices and reliability of our electrical energy by responsible actions by users. If we behave responsibly, we can also help the environment by using less energy. This is how it works. During times of peak electrical energy use which occurs on hot summer days, we sometimes run short of the energy. Sometimes this is because our utilities haven’t bought enough and they need to buy on the spot market. It is expensive to buy energy at the last minute and these costs are ultimately passed on to all of us. We also believe that these higher prices encourage the construction of more power plants and the need to bring on-line older more polluting facilities. There is another way to handle the problem rather than buying more energy. This solution is to shutdown some users. This is done by turning off part of the grid so that some people get no energy for several hours a day. This is what happened in the energy crisis a few years ago. Sometimes it will be the area next to you and sometimes it will be your area. If many users agree to cooperate and shed load at peak times, these conditions can be avoided.

You need to understand that the utilities cannot predict the weather or climate changes. If the utilities buy energy very conservatively so that we always have lots of power, we encourage the construction of more power plants and we will have to pay more for energy overall. If they buy too little, then one of the two solutions is necessary. They can either buy more expensive energy or they can give us less energy. You need to understand that the demand response programs are not to help your utility; it is to help you and our society.

You also need to understand that demand response is a program that offers you some money to cut back on your energy use at critical times. These programs may cover some or all of your costs if you want to help your society. Sometimes you will even make money by participating. The important thing to understand is that if you participate, you can contribute to a serious energy problem in this country.”

This definition of DR which includes an SR explanation has support from the individuals at the store level as a policy that IKEA would adopt. When the purpose of was described to them in this way, they agreed that it was a policy they would personally support, but they did not have the authority to make this decision.

The decision to adopt DR is presently left in the hands of the utilities that have chosen to frame it in the cost pay back/ business model without emphasis on the SR portion of the decision. The social science definition appears to garner more support and should be incorporated into their definitions. Framing the issue to include SR reasoning may encourage the adoption process.

Recommendation Two: Sell to the Right Level

If the decision to participate in DR programs is left at the local level, it will be determined solely from a business and economic cost benefit studies, as this is the only decision making methodology facility managers have. Utilities must either present a more financially rewarding incentive or they should seek other solutions to encourage adoption.

Local facility managers described other SR policies such as recycling of packing material that are intensively followed although they do not provide a complete cost payback. These policies are set at the top level of corporate headquarters and enforced in audits at the store level. Store managers report that if an item is found on their annual store audit it will be thoroughly completed even if it does not have short cost paybacks.

Decision-makers at the top corporate level are likely to require detailed information about benefit and importance of DR before adoption. Local managers may need only to understand the simple story – DR is “good” and the company requires that it be done by placing it on the annual IWAY audits.

Recommendation Three: Use NGO Partners to Promote and Legitimize Demand Response

IKEA partners with NGOs partners to select, legitimize, and develop their SR programs. These third party NGOs help define the program implementation and provide top managers with the confidence that the SR program is worthy and desirable. The selection of the NGO appears to be important. Previous NGOs that IKEA has partnered with in other areas have been internationally recognized for their principled positions. The policies that have been adopted are internationally applied, that is, they are effective in all parts of their operations and in all locations.

The selection of the NGO partner must be done carefully. Previous partnership agreements between business and NGOs have proven to be very labor intensive and sensitive negotiations that required the long term commitment from participants. Possible partnerships that could support DR partnerships are:

- ◆ World Resources Institute - An environmental think tank that uses research to create practical partnership agreements with members. This group is actively involved in partnership development for environmental issues including energy efficiency.
- ◆ United Nations – Climate Change Group - Provides access to a consortium of member NGOs on global climate change including Demand Response. Linkages between DR and climate change will need to be made for the decision-makers.
- ◆ Environmental Defense – Environmental group that has a partnership program for environmental issues.

Although the above recommendations have been based on interviews primarily in California, the authors hope that they will help DR compete on an equal footing with other socially projects under consideration by MNCs operating in California and beyond.

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