

CEE Case Study

State of Idaho

I. Background and Perspective

A. Organization, Staffing Levels and Primary Function

The State of Idaho is a Pacific Northwest state. The executive branch operates no more than 20 departments, according to a constitutional amendment enacted in 1972. The major departments are education, health and welfare, and transportation. Idaho has gained a reputation for independent voting on a national level; an almost equal number of Democratic and Republican candidates for the presidency have received the state's electoral votes. Recently, Idaho has had a more Republican focus, with a Republican governor and a greater number of Republican congressional officials.

Issues related to maintenance of a high-quality environment and to wilderness preservation have remained prominent in recent decades. Idahoans are very conscious of environmental issues as individuals, but not necessarily in the organizations they serve.

There are over 60 personnel in the Purchasing Department alone. The State operates an estimated 3-4 million square feet of facilities. The largest agencies are the Department of Public Works, Health and Human Welfare, Transportation and Parks and Recreation.

Large agencies such as Public Works, Transportation, Health and Welfare, Fish and Game, and Parks and Recreation have their own in-house engineers to develop energy projects and specify energy efficient products.

B. Annual Capital and O&M Budgets

The capital budget for the State of Idaho is \$24 million including alterations and repair. Those interviewed did not have budget information for the State's overall energy consumption, however they noted Department of Public Works energy bill is \$43,000 per month at 3.5 cents per kilowatt hour. Energy bills go to the landlord of using the Agency.

C. Highlight of the Procurement Function

We interviewed the following staff involved in procurement decisions:

Mike Despot, Manager of Facility Services, Division of Public Works. He oversees 1.2 million square feet.

Larry Osgood, Director, Division of Public Works. 208-332-1911

Gerry Sylvester, Buyer, Division of Purchasing

Frank Pierce, Training Coordinator, Division of Purchasing

Ken Fresee, Facilities Management for Health and Human Welfare.

Ken Baker, Conservation Bureau Chief, Idaho Department of Water Resources (IDWR)

Janet Garret, Buyer, Idaho Department of Water Resources (IDWR)

Purchasing is very decentralized. Buyers such as Gary Sylvester in the Division of Purchasing handle anything less than \$25,000 or state wide contracts that benefit multiple

agencies. Gary's contracts include office equipment, copiers, lamps and ballasts. Buyers process bids, and write some specifications. Specifying is often shared by the buyer and user or contractor. The facilities manager will specify building-related products, including energy efficient products. Buyers in the Purchasing Division don't mandate anything, but they occasionally make recommendations. All state-wide contracts they develop are put together with the direct influence from the users in the various departments. Any effort to try to educate or form some other initiative at the end user level would have to be worth their time; for example, they were willing to have us attend a purchasing workshop directed at department buyers, and present information on the Energy Star Purchasing Toolkit.

Vendors and service providers also play a role in procurement, though energy efficiency has not been a strong focus of contractors. Most agencies hire outside architecture firms when setting specifications for most equipment. If the project is strictly mechanical, they might hire a mechanical contractor. The State building operators and buyers rarely influence the specifications. In the past they have attempted to encourage the contractor to do things, but the contractor generally does not take a very proactive role.

D. Importance of Energy Related Products to the Organization's Function

The State of Idaho purchases products from most of the Toolkit product categories. While energy efficiency is not a driving criteria, we found several individuals who emphasized energy efficient choices in their decision making, and were interested in more information for continuing efforts in the future. Several are highlighted below in Section E.

E. Profile of Past Years Energy Related Purchases

The State of Idaho became a Green Lights partner in the early 1990's. A facility manager group formed to look at energy efficiency issues and share information. The state Department of Water Resources also supported development of an independent building operators association called the Idaho Building Operators Association to foster energy efficiency practices in facilities throughout the state. The facility manager group has since disbanded, although there is interest in reconvening if there were specific efforts the group could take.

There is tremendous opportunity for energy efficiency purchases in the next few years. The state DPW currently has 206 active renovation and new construction projects. There will be another 100 more this year. They are currently working on a grant with IDWR and the Department of Energy to do building commissioning.

Mike Despot, DPW: He has found energy efficiency procurement to be relatively easy. They are currently doing floor by floor and lamp by lamp retrofits to improve lighting efficiency. He at one point paid \$6,000 for an audit of one buildings that he wasn't at all satisfied with. He had a bad experience with this service provider, which has made him reluctant to pursue larger scale building retrofits. The engineer in this case wouldn't look at what he thought were practical measures. For instance, he wanted the engineer to look at better ways of using their EMS system, and controlling the lighting systems, but

instead got back a report on daylighting. He feels daylighting doesn't really work, or at least is not really accepted, but more importantly, the engineer did not pay attention to his needs. Other measures the engineer recommended would take a lot of time away from his electrician, in upkeep and maintenance and training. He ended up doing the retrofit themselves using in house engineers.

There is a lot of potential for energy efficiency, especially since there are so many old buildings. They've done a fair amount, especially in the State hospitals. Of the 100 projects this year, only 6 are new buildings, giving a lot of opportunity for equipment replacement. There is no insulation in several DPW buildings. This is consistent for buildings throughout the State.

They use a geothermal heat pump (there is a lot of geothermal activity in Boise) to provide heating for the DPW buildings, and chillers for cooling. They are in the process of upgrading chillers. CFCs are beginning to be a problem that will be pushing them to do something (more efficient). Their controls are on water loops using outside air. There are almost no incandescents left in any of the DPW buildings.

Statewide, however, they haven't gone into other departments buildings, because they don't have the mechanism. Some agencies are taking their own initiative: University of Idaho, for example, replaced outdoor chillers with chiller plants and absorption chillers. Idaho State University did one building with a performance contract. They were limited by statutes-- no agency can do a project over \$30,000 without the Department of Public Works. Department of Public Works gave money--\$50,000, to do energy efficiency studies.

Idaho Power has also been involved in different energy efficiency projects. For example, they gave a grant to Parks and Recreation that paid for several different lighting schemes. No one is currently keeping track of this project, however, so they don't really know what the results are.

Mike was very interested in getting people to start using more of the Power Strips that would automatically turn off office equipment. However, since the product he was wanting people to use was a specific brand, he couldn't hand out information on them.

Ken Fresee, Health and Human Welfare. They've reviewed all of their buildings for energy efficiency, and have done energy upgrade projects over the past 2 years earning a savings of \$27,000/year. He has been replacing pumps with high efficiency ones (88-90%), only when he's had to replace. They also looked at upgrading and improving the HVAC systems. There are four installed, with recordable impact from digital controls. He is also doing ongoing reinsulation and window replacement.

He did some specific energy conservation measures at the State Hospital, where they had an old steam boiler. He switched to individual boilers in the units. Energy surveys indicated a \$75,000/year savings; they've had \$57,000 savings the first year.

He was able to reduce the operating costs of South Hospital by \$67,000, and through a re-metering program of North, he got a utility rebate of \$158,000. He was able to roll these funds back into the program.

Janet Garrett, IDWR: When they buy task lighting, she generally orders energy efficient lamps. Some people don't like them, and say they are too frosted, or too bright. They buy CFLs, and generally have them in stock rather than incandescents, unless someone specifically asks for something else. She used to buy rechargeable batteries, but people complained about the shorter life. They buy or lease copiers and faxes through the division of purchasing copier contract. They don't buy refrigerators or other appliances.

II. Findings - Procurement Process

A. Guiding Regulations

The primary guiding regulation governing the State of Idaho's procurement function is a public bid process. The process requires the state to issue an RFP with specifications for the products desired for purchases above \$35,000. Vendors bid on the RFP and from the bid a winner is selected.

The state has an energy code which they require architects and designers to follow in specifying equipment for new construction and renovation projects. Their work is not closely policed however. The energy code is almost identical to ASHRAE 90.1.

There is no state policy for energy efficiency appliance purchases, however the government encourages suppliers to offer such. Ken Baker of IDWR has done an education and marketing campaign. There was also an executive order with energy efficiency in it, for the design of state buildings and product purchases. It encouraged agencies in the consideration of purchasing fuel economy in sedans and light trucks. The state makes energy efficient products available (light lamps and electronic ballasts), but the ultimate choice is up to the end user.

In the early 90's, the state became an EPA Green Lights partner. The driving reason for participating, though, was cost effectiveness, where they could show long term savings. This offered some guidance to facility managers and buyers in the purchase of lighting products. They are no longer a partner.

In the mid-90's, the state dedicated \$100,000 to do audits on existing buildings. Ken Baker's office (IDWR) had the spending authority. There is still funds left to do audits of buildings; it has been a challenge garnering interest from State agencies, and encouraging commitment in following through with a retrofit.

Current legislation in the state is considering deregulation. Gas was deregulated, and most institutions (including hospitals), have negotiated contracts in conjunction with purchasing to find the best prices.

Those interviewed said it is hard to get codes passed through legislature because Idahoans are generally conservative, and resistant to regulation. Therefore, people rarely support codes.

B. Other Internally Required Analyses/Procedures

Two processes were identified as barriers to energy efficiency. One is how energy savings dollars are treated, and the other is the lack of technical expertise in energy efficiency. Energy savings do not return to the agency. They spend budget money on doing projects, then the savings go into a general pool. Therefore, they would not see the direct benefit of the savings, since the money would go to the State-wide funding pot in the worst case, or would just go to pay for Division programs or general salaries, not to new energy efficiency programs or to support facilities. The building manager would have to do a lot of work for retrofits (dealing with the contractor, etc.), and would basically see little or no benefit.

In-house expertise is important for being able to undertake energy efficiency projects in-house. Larger agencies such as Human Health and Welfare can be more self-reliant because they have more specialized staff such as energy engineers who have the confidence to undertake more challenging endeavors. Small agencies would have a bigger challenge with doing energy efficiency retrofits or purchasing.

All agencies are limited to products listed in the state contracts. The agency specifies products, and can purchase as long as it fits within their budget. Product purchases depend on the person ordering the equipment. Individuals will generally request a list of product items from the department buyer, when they know what they want to order. Buyers could include information on energy efficiency, but generally don't.

Departments buy or lease copiers and faxes through the Division of Purchasing copier contract. They generally don't buy refrigerators or other appliances. Most purchasing comes through the buyer; each section within a department has the ultimate decision, but a buyer could point out features if they feel it is relevant. They may give information pertaining to items, but can't say one is better than another.

C. Final Criteria/Bases for Product Selection

Reducing the cost of operation, keeping customers/users satisfied, and staying within the budget were identified as key criteria for product selection. Energy efficiency is compatible with reduced operating costs, but not necessarily with budget constraints or users preference. All of the buyers we spoke with were open to learning more about energy efficient products and encouraging these purchases. For IDWR, the top priority is to stay within the budget. Sometimes energy efficiency is not feasible, price-wise. Purchasing choices generally depend on the product, on personal preference, or on what's been bought before.

D. Planning Cycle/Timing of Decisions

The DPW solicits project funding proposals from all agencies on an annual cycle. They put the recommendations together of which projects to fund. In the past, DPW receives far more proposals than they can fund (\$120 million requested from universities, for only \$10 million available). The priority is placed on building improvements that address direct damage or anticipated failures. Energy efficiency can be worked into this; however

efficiency alone will not sell. It is hard to upgrade lights, for example, unless they are already broken.

The timetable for 1999 is as follows:

- Before June 15: Individual departments put together tiered requests for project to DPW
- June 15: A group of 25-30 people (department people who report to the director of the department, and the DPW) review proposals and make 2 or 3 tier recommendations.
- September 1: Recommendations are sent to the Governor's office.
- October: Departments present their proposals to the Public Building Advisory Council.
- November 1: DPW gives their final recommendations to the Advisory Council. The Council will examine these, and make their own recommendations, then send them to the Governor's Office, who in turn make their recommendations and sends them to the Legislature. Legislature would make the final recommendations, which are then signed by the Governor. In general, the various recommendations by the Council, the Governor's office and the Legislature aren't much different from the recommendations of DPW.

E. Standard Inputs/Information Sources

Buyers and facility managers do their own research. They also rely on quarterly training meetings for procurement staff. Facility managers have relied on their networking group in the past, but this group is no longer meeting. Some facility members use IBOA to learn about energy efficiency opportunities. Utility programs through Idaho Power have also been a resource for information and incentive.

Vendors and service providers seem to be the main resource for information. However, we found general dissatisfaction among facility managers with the service they received from energy efficiency consultants and vendors. They do rely heavily on architects for product specifications.

F. Personnel Involved

Same as #3 above.

G. Sign-off Responsibility and Thresholds – Flow Diagram

FACILITIES PURCHASES

Purchase Amount (\$)	Process	Approve/Sign Off
< \$2,500	Phone bid	Departments
> \$2,500 - \$30,000	Informal advertising 7 days prior to purchase. Must self fund.	Departments
>\$30,000 - \$100,000	see notes below	Department of Public Works

>\$100,000	see notes below	Department of Public Works
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Over \$100,000

Any projects over \$100,000 need approval from DPW and must use DPW specialists, or hire specialists and architects approved by DPW. Getting approval for a project from Public Works is contingent upon project priority. Priorities from high to low are real estate upkeep, mechanical engineering projects, energy projects, painting, then landscaping. For instance, a window replacement project to low e windows would have a low priority. But if they can get matching funds from a grant, or if payback is less than 5 years, the priority becomes higher. Additionally, the Department must advertise a full bid 14 days prior to purchase. Generally, they need to allow one month for the process to go through.

Between \$30,000 and \$100,000

Projects in this range need approval from DPW, but not a DPW specialist. Project priority criteria apply, but once approved will usually happen faster than projects in excess of \$100K. Additionally, the Department must advertise a full bid 14 days prior to purchase. Generally, they need to allow one month for the process to go through.

GOODS AND SERVICES PURCHASES

Purchase Amount (\$)	Process	Approve/Sign Off
< \$1,500	No bid.	Agencies have discretion
>\$1,500-\$25,000	Informal bid, must obtain three quotes and provide documentation	Agency buyer
>\$25,000-\$200,000	Formal bid process, 10 sealed bids	Department of Purchasing
>\$200,000	Formal bid process, RFP sent to every vendor registered in State	Department of Purchasing

H. Financial Parameters

The state is not allowed to borrow money, however, performance contracting is an option. Performance contracting is often too complex for most facility managers, so it is not widely used. It might be more broadly used if the process could be simplified.

Other sources of financing have been federal grants (e.g., State Hospital South project) and the Exxon Valdez settlement, with a 2/3 - 1/3 split.

I. Potential Efficiency Gains

Much progress has been made as identified in section I.E.. There is also a good deal of opportunity.

As an example, Mike Despot calculated possible savings from shutting off computers when not in use. He saw they could save \$18,000 if they shut off computers over a long weekend, and \$50,000 if they shut them off at night for a month. He's tried to do

something about it, and has gotten a lot of flack for it. He even got a nasty letter from someone.

Additionally, equipment currently purchased by the state (and frequently specified by outside contractors and architects), is generally not energy efficient. As an example, most furnaces purchased by the State are 85 AFUE. There is also a lot of potential in building commissioning, and in building retrofit projects. Educating building operators could realize a lot of benefit.

We see a large potential opportunity in working with vendors who contract with the State, as they seem to specify a high portion of the projects. It is unclear how many are specifying with energy efficiency in mind, but we assume that there are very few.

J. Comments/Suggestions Regarding the Energy Star Purchasing Toolkit

Most of the Energy Star Toolkits for Idaho procurement officers were sent through the WSU Toolkit research portion of the project. We left a few kits with individuals in the state but have received no comments to date.

K. Other

III. Recommendations

A. Host Organization – Prioritize Recommendations Considering Cost vs. Benefit

1. Educational Seminars

As mentioned above, individuals are extremely conscious of environmental issues, but don't necessarily carry this concern to the organization they work in; not out of lack of desire to do so, but we think out of a lack of education on the environmental benefits of energy efficiency.

There are hundreds of State Agency retrofit projects on the slate for future action. There are opportunities to make these projects more efficient by raising awareness among the facility managers and purchasing agents involved in writing the specifications. We recommend educational seminars tailored to the roles of each position. For facility managers, we recommend workshops focusing on "Identifying energy efficiency opportunities in your retrofit project" and "Financing your energy efficiency projects through Performance Contracting." For purchasing agents, we recommend workshops focusing on "Purchasing for energy efficiency", and for both, "Ensuring energy-efficiency purchases with vendors". We see a lot of value in making these seminars highly interactive, and having sessions which would be attended by both State purchasing agents or facilities managers and vendors, and creating dialogue between the two groups.

Reconvening the State's facility manager's group, as an interactive workshop between facility managers active and attentive to energy efficiency and those less educated, would also increase building energy efficiency. Presenting information in an interactive, challenge/solution format successful in the Rebuild America's Peer Exchange meetings would be a way to get participants more involved and committed to solutions.

2. Rebuild America Program

The State of Idaho is a Rebuild America partnership. Their partnership focuses on communities within the State. We recommend that some of the actions the State takes under this partnership be for State departments and buildings. In particular, the State could use other partnerships such as the local utilities and universities to help advance energy efficiency within the State facilities.

3. State Purchasing Meetings

For purchasing officers, we also recommend a presentation by EPA at one of the quarterly purchasing meetings organized by Frank Pierce, State Purchasing Training Coordinator. These meetings reach 75 state department buyers. The topic could focus on “Using the ES Toolkit to help your customers save money on their purchase decisions.” We attended one of these meetings, and presented some of the concepts to attendees. The presentation was well received; most initially did not feel they purchased for energy efficiency, but when told most office equipment at least has efficiency features, they were interested in enabling features and encouraging others in their department to do so. They were also interested that efficient lighting and other types of products existed. A lot more work can be done with this group to encourage them in energy efficiency purchasing.

4. Work with Associations

Work with local facility manager associations such as the Idaho Building Operators Association (IBOA) to offer presentations at chapter meetings and annual conferences on energy efficiency procurement could increase awareness among facility managers. IBOA has been active since the early 90’s raising awareness of energy efficient building operations. They have an ongoing training and certification program (Building Operator Certification) for facility O&M staff responsible for institutional buildings. Explore with IBOA the feasibility of integrating the topic of energy efficient procurement into the curriculum for this training.

5. Work with Vendors

Seek opportunities to improve vendor/service provider-buyer relationships. We observed dissatisfaction from facilities staff with the services they received from contractors and vendors. This has created frustration and distrust. We did not talk with vendors about their experiences working with the state, but recommend convening a meeting of product vendors to identify barriers selling energy efficient products to state and public entities.

B. Other Similar Organizations - Prioritize Recommendations Considering Cost vs. Benefit on a Large Scale.

We believe the challenges faced by the State of Idaho are indicative of many states with less active energy policies. Education of buyers and specifiers of equipment should be a first priority; doing so in a way that gets individuals involved and committed would be possible through interactive meetings emphasizing successes, challenges and solutions. Working with vendors also would solve some of the existing barriers, as vendors seem to specify many projects and equipment. We see a strong possibility of running several interactive meetings for various types of groups involved in energy efficiency purchasing, and building a design for the meetings that would be replicable in other similar organizations.

C. Purchasing Initiative - Necessary Procurement Tools and Aids (with estimates of developmental costs) with Broad Application and Benefit

Case studies

Case studies can be built out of each of the pilot studies, plus additional case studies used from other similar programs (EPA or DOE programs), to share with organization wishing to do similar work. For case studies build on the pilot studies, the information in these reports could be condensed and presented in a format that is easier to read. Development costs would be minimal.

Green tips

Green tips could be developed on a monthly or other periodic basis, for inclusion in organization newsletter, or as general tips to be sent to a listserv. These tips could be taken from existing sources (again, EPA or DOE programs among others), and could focus on equipment and service related issues, as well as resources that exist to assist people in overcoming challenges. Again, development costs should be minimal for this effort.

Drop in policy language

Several of the organizations we spoke with were interested in other policies, city-wide, state-wide, or by department, that had been written and used by other organization. They were also interested in the processes used to get these policies in place; information on such could be included as a precursor to the language. Again, development costs should be minimal for this effort.

Toolkit more product focused

Several individuals were interested in product specific information about energy efficiency products, and a comparison between energy efficient and less efficient products. This could be done in conjunction with Consumer's Reports, which in the past has issued reports with energy efficiency information for products; simply including that information, as it is available would partially satisfy the requests. In general, however, this type of information can be difficult to provide, as product information can become very quickly outdated. We felt that having more specific information than just "Efficiency recommendation depends on type and wattage of the lamp" would be useful for the lighting section. Even some information on general wattage and efficiencies by product type would be useful, e.g. T12 vs. T8 vs. T5 lamps, or comparing CFLs to incandescents. The development cost of such an effort can be more extensive than the other measures mentioned above, but also could be minimal depending on the effort involved.

IV. Implementation Plan

The implementation plan for improving energy efficiency procurement in the State of Idaho would focus on bringing to action many of the recommendations proposed above. We would propose this happen in three phases.

Phase I: Scoping and Development

We would meet with representatives from three of the key players in the procurement function including facility managers, purchasing agents, and product vendors to identify informational needs and help design effective formats for addressing these (e.g., meetings, technical sessions, etc.). We would expect to recruit state individuals to be a part of developing and/or implementing educational activities. We would also identify state and regional organizations which could contribute value and resources. This could include the Lighting Design Lab which serves the four-state region, the Northwest Energy Efficiency Council, and local purchasing and facility professionals chapters, as well as other Rebuild America partnerships in the State. In the pilot project, we identified a number of existing groups we could access for this scoping phase.

- Convene the state facility managers group for this meeting.
- Attend one of the quarterly purchasing agent meetings conducted by Frank Pierce and discuss how best to work with this group on energy efficient procurement.
- Work with the Northwest Energy Efficiency Council to convene a meeting of vendors to similar to the one held in Washington State.
- Work with other Rebuild America partnerships in the state, such as the utilities or universities.

Phase II: Educational activities

In this phase, we would act on priority recommendations emerging from the scoping meetings by developing educational formats, topic areas and a schedule for conducting workshops or meetings. Examples might include interactive workshops with each of these key player groups; technical presentations at agency and professional association meetings; vendor fairs/product days for information exchange.

Phase III: Feedback and Next Steps

In this phase, we would review feedback from participants involved in Phase II activities to identify which events were useful and specific actions that resulted.

V. Results

These design and focus of implementation plan activities should be on these results:

- Common understanding of energy efficient procurement challenges,
- Increased commitment to solutions,
- Greater awareness of opportunities,
- Increased understanding of current information sources, and increased State-wide networking to improve access to information,
- Understanding of the resources vendors can bring to the process,
- Improved vendor-customer relationship.

ATTACHMENTS

Copy of the State of Idaho Energy Code