

BEXAR COUNTY, TEXAS

A Case Study of Energy Efficient Purchasing Practices

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Executive Summary

Bexar County, located in South Central Texas, is one of the 254 counties in Texas. Bexar County and the City of San Antonio reflect a typical US County, and that information derived from this study would apply well as a model to other areas across the country.

Bexar County illustrates well the barriers to purchasing energy efficient equipment that face many municipal organizations throughout the United States. Specifically, Bexar County illustrates the difficulties of incorporating energy efficient concerns into purchase decisions due to:

- A bureaucratic and cumbersome decision-making process
- Misconceptions about energy efficiency
- No built-in incentives to consider energy efficiency in purchasing
- Lack of a formal “energy efficiency” policy

County Organization

Bexar County Government provides a range of services to its citizens. However in Texas, all decision-making authority ultimately rests with the Commissioners’ Court and the County Judge. This dispersion of power creates a cumbersome bureaucratic process that leads to virtual “micro management” of all county departments by a select group of elected officials called Commissioners.

The County Judge is the presiding officer of the Bexar County Commissioners Court as well as the spokesperson and ceremonial head of the County government. The Court is responsible for budgetary decisions, tax and revenue decisions, and all personnel decisions except for certain positions that are either elected or appointed by the judiciary or other committees. The court is relevant to purchasing of energy efficient technologies because it approves all retrofit or new construction plans and expenditures and any purchases over \$15,000. Therefore, departments are not encouraged to work together in procurement initiatives, since this would require approval from the County Commissioners.

Ultimate decision-making authority within Bexar County rests with the County Commissioners Court, including energy efficiency and procurement matters.

Procurement in Bexar County

The purchasing department processes approximately \$33 million dollars per year in purchasing requests. The purchasing department works on a requisition basis, handling the bidding and vendor selection for purchased equipment. The department **submitting** the requisition selects the necessary technology and thus most influences the selection of energy efficient equipment. Since procurement officers are often nothing more than paper pushers, they have little incentive to learn about the advantages that energy efficient equipment provides, or promote a standardized procurement policy.

The role of the purchasing department, as in many city and county governments, is largely administrative.

Energy efficiency has also received a “bad rap” in Bexar County. Several years ago, a former administrator was known for “draconian” efficiency measures which included cutting lighting wattage levels in offices and hallways creating a difficult and in some cases dangerous work environment. The measures generated significant complaints, and energy efficiency is still associated with negative connotations. Thus, Bexar County must overcome these misconceptions regarding energy efficiency, before it can begin to implement an effective energy efficiency policy.

Furthermore, energy efficiency is rarely a consideration in purchases, since bids are evaluated on purchase cost rather than life cycle cost. Bids are evaluated based on purchase cost rather than life cycle cost. Lastly, qualifications specific to energy efficiency are not requested and are not considered within the selection of architects and engineers.

Recommendations

This case study illustrates the need for a comprehensive and concerted energy efficiency education and training initiative aimed at both the decision-makers and the specifiers within municipal organizations. The following recommendations are designed to assist both Bexar County as well as other municipalities facing similar concerns and issues.

- ***Energy Decisions Are Best Left to Energy Experts***

Employees in the purchasing positions are often just order takers for the specifying departments. If the County truly wants to develop a more comprehensive energy management plan, then it needs to recruit and cultivate energy experts.

One cost-effective strategy may be to rely on outside experts, such as contractors, instead of committing to a full-time, salaried employee. The easiest

way to implement this recommendation would be to require firms submitting qualifications for design and/or construction support to report on previous experience with energy efficiency. In addition, inclusion of this experience could be incorporated into the Commissioners Court's selection criteria.

The resulting contracts should require support firms to evaluate energy efficiency alternatives in specific areas such as building shell (windows, insulation, roofing, etc.), HVAC selection, air handling, lighting (and day-lighting), hot water, and so forth.

The most successful municipal organizations have made an on-going commitment to energy efficiency. These organizations delegate the energy efficient purchase decisions to their internal experts. Alternatively, they need to hire at least one energy engineer who can provide this technical information as a resource for the municipal organization as a whole. The cost of this engineer's salary will be more than made up for in the reduced operating costs and maintenance needs.

- ***Energy Experts Need Organizational Authority for Decisions***

Another reason that Bexar County faces such difficulties with implementing a comprehensive energy efficient procurement policy is that it has no standards or guidelines in place to direct these activities.

One immediate suggestion would be to purchase Montgomery County's *Energy Design Guidelines*, as a way to identify potential savings by purchasing and installing energy efficient equipment.

However, standards without enforcement are meaningless, even in organizations with the best intentions to save money. Therefore, Bexar County must establish an energy policy that allows the energy experts the ability to monitor and enforce these standards. Unfortunately, that endorsement can only come from the Commissioners Court.

- ***Develop Energy Champions***

Since there is no written policy to consider energy efficiency in new construction, expansions, or general purchasing requests it is dependent on pioneering personalities or contractors to recommend improvements. As contractor and design support are not qualified based on energy efficiency awareness, there is no encouragement of energy conservation on the contractor level.

Procurement officials are overwhelmed with information and demands on their time, and this trend is likely to increase. Therefore, it will not be enough to just develop and deploy energy efficiency training materials, such as the Energy

Star Purchasing Tool Kit, but it will also be necessary to create a support system to disseminate this information within each targeted organization.

Bexar County, working with CEE, needs to cultivate “energy missionaries” to spread the word about the benefits of energy efficient purchasing throughout the organization. This would ensure that any gains made in this area are lasting and long-term. By spreading the word about energy efficiency, and educating procurement officials as well as decision-makers, this will lead to a greater understanding of, and appreciation for, energy efficiency that will out-last the tenure of any elected official or political trend.

- ***Bring procurement officials to the table. Educate them on the benefits of sampling procurement processes, better equipment reliability, and exceeding minimum codes (in other words ensuring compliance) rather than focusing exclusively on energy savings.***

Procurement officials are not the ultimate equipment purchasers. Nor should they be. Rather, they should be viewed as a resource along the way. However, they do not want or have the authority to actually influence the purchase decisions.

In summary: If energy efficiency is to become a consideration within Bexar County, it will require fundamental changes in the County’s policies and perceptions.

A. Introduction

Bexar County, located in South Central Texas, is one of the 254 counties in Texas. The county population of 1,382,990 ranks 3rd in the State, largely because it includes the San Antonio Metropolitan Area. The population of the county has risen 15% since 1990 (approximately 200,000 people). A large percentage of the population is Hispanic (54%) with Anglo (40%) and Black (6%) making up the remaining racial mix. San Antonio is now the eighth largest city in the United States and boasts one of the fastest growing metropolitan areas. The dynamic and diverse economy is a healthy mix of: business services; a rapidly growing medical and health delivery sector; a diversified manufacturing sector which produces everything from aircraft and semiconductors to rolled aluminum sheet and cement; and, a well established convention and visitor industry.

Bexar County has the third largest population of the 254 counties in Texas.

The largest industries for Bexar County in 1996 were services, 26.2 percent of earnings; state and local government, 11.4 percent; and transportation and public utilities, 11.2 percent. Of the industries that accounted for at least 5 percent of earnings in 1996, the slowest growing from 1995 to 1996 was military which increased 1.3 percent; the fastest was construction, which increased 8.4 percent. In 1996, Bexar had a total personal income (TPI) of \$28 billion. This TPI ranked 4th in the State and accounted for 6.6 percent of the State total. The 1996 TPI reflected an increase of 5.4 percent from 1995. The 1995-96 State change was 6.4 percent and the national change was 5.6 percent. Total personal income (TPI) includes the earnings (wages and salaries, other labor income, proprietors' income); dividends, interest, and rent; and transfer payments received by the residents of Bexar. This information implies Bexar County and the City of San Antonio reflect a typical US County, and that information derived from this study would apply well as a model to other areas across the country.

Bexar County Demographics
Population – 1,382,990
Geographic Area- 1,247 Sq. miles in South Central Texas
Government Employees – 116,700 (1994)
Number of Buildings 137
Average Electric Rates- .038/KWH (Industrial Rate)

City Public Service – The Municipal Utility

City Public Service (CPS) is the municipal utility operating under a Board of Trustees and owned by the City of San Antonio. CPS has provided

metropolitan business customers with gas and electrical power with 25% reserve capacity and industrial power rates below the state and national average. CPS has also lowered rates for its largest users including the city. Time-of-use and interruptible rates (with a 4-hour advance notice) are in place.

CPS operates several power plants that utilize natural gas, nuclear, and coal as fuels. These plants have a combined capacity exceeding 4,500 MW. 1998-99 Operating and Construction budgets include the construction of a 500-megawatt plant in southeast Bexar County to service 13,000 projected new customers. This is not projected to increase electric rates.

Average electricity rates for industrial users are \$0.038 per kWh and can be as low as \$0.031.

Due to recent developments, CPS anticipates increased competition and is anxious to present itself in a favorable light to the city. It is thus an excellent time to pursue partnerships that are beneficial to both County and the utility.

B. County Government Organization

Bexar County Government provides a range of services to citizens. The government is organized functionally. The functions of the Bexar County Government include Administration, Public Safety, Judicial, Public Works, Transportation, Taxation, Health and Human Services, Community Development and Housing, and the Environment. The County is organized into the following departments which fall under the authority of the Commissioners Court / County Judge:

- Constables
- County Clerk
- County Courts at Law
- District Attorney
- District Clerk
- District Courts
- Justices of the Peace
- Probate
- Courts
- Sheriff
- Tax Office
- Infrastructure Services (Public Works)
- Metropolitan Planning Organization (Transportation)
- Purchasing
- Planning & Resource Management Department (Personnel Division)

Commissioners Court:

The Commissioners Court, which is composed of the County Judge and four Commissioners, is the overall managing/governing body of Bexar County. The County Judge is the presiding officer of the Bexar County Commissioners Court

as well as the spokesperson and ceremonial head of the County government. The Court is responsible for budgetary decisions, tax and revenue decisions, and all personnel decisions except for certain positions that are either elected or appointed by the judiciary or other committees. The court is relevant to purchasing of energy efficient technologies because it approves all retrofit or new construction plans and expenditures and any purchases over \$15,000.

The Commissioners Court:
County Judge Cyndi Taylor Krier
Pct. 1 Commissioner Robert Tejeda
Pct. 2 Commissioner Paul Elizondo
Pct. 3 Commissioner Lyle Larson
Pct. 4 Commissioner Thomas F. Adkisson

Regional Councils in Texas

Regional councils are voluntary associations of local governments formed under Texas law. These associations deal with the problems and planning needs that cross the boundaries of individual local governments or that require regional attention. Regional councils coordinate planning and provide a regional approach to problem solving through cooperative action. Although known by several different names, including councils of governments, regional planning commissions, associations of governments and area councils, they are most commonly referred to as "regional councils" or "COGs".

Bexar County participated in a number of COG initiatives including a cooperative purchasing program that helped 750 local governments statewide save on equipment and supply purchases of \$57.4 million in 1996.

Regional councils participate in comprehensive planning with funding provided from local funds, state assistance, and special contributions; projects include regional data collection and analysis, mapping, and coordination of transportation, environmental, economic, and social program plans. More recently regional councils have been asked increasingly to undertake implementation activities and direct services at the local level. Bexar County participated in a number of COG initiatives including a cooperative purchasing program that helped 750 local governments statewide save on equipment and supply purchases of \$57.4 million in 1996 alone.

A total of 2,029 cities, counties, and other local governments such as school districts, soil and water conservation districts, and other special districts are currently members of regional councils. This includes all 254 of Texas counties, plus two counties in adjacent states. Counties and cities comprise the majority of regional council membership, with almost two-thirds falling into these categories (12.6% counties; 49.7% cities).

Regional councils are defined by law as political subdivisions of the state, but they have no regulatory power or other authority possessed by cities, counties or other local governments. Decisions by regional councils are not binding on member governments. These decisions are considered and adopted as members' needs require. As political subdivisions, regional councils are subject to state laws governing open meetings, access to public records and conduct of public officials.

Organization and Management of Regional Councils:

The governing body of a regional council must consist of at least two-thirds local elected officials of cities and counties. This quota allows the regional councils flexibility as to the composition of their boards, and some councils include citizen members or representatives of other groups on their governing bodies. A system of policy advisory committees composed of both elected and appointed local government officials and citizens assists in defining the needs of the region, although the use of such committees differs among the regional councils. Regional councils have much in common, but each adapts itself to the special aspects and needs of its region.

The organizational structures of the 24 Texas regional councils vary and each regional council has its own bylaws or articles of agreement. The policymaking bodies in most of the councils include the general assembly and the board of directors, and either of these groups may govern the regional council. The general assembly usually meets semiannually, while the board of directors (executive committee) meets on a monthly basis. Councils establish standing committees to work on issues and concerns identified by the policy making body. Several councils have established subcommittees devoted to purchasing procedures, standardization of suppliers and technologies, developing partnerships with suppliers and so forth. As noted above, these subcommittees have already recognized significant savings.

A full-time professional staff carries out the directives of the policymaking bodies. The executive director, who is employed by the governing body, is the chief administrative officer of the council. The executive director manages the regional council's daily operations and staff. Typical staff positions of a regional council include director of regional planning, fiscal officer, regional services coordinator, and planners and coordinators for criminal justice, employment and training, environmental, and other programs.

Initiatives to encourage the adoption of energy efficient technologies would be effectively initiated through regional councils. It is consistent with purchasing and environmental goals already considered important by established councils, regional councils effectively reach top level county and city government and purchasing officials, and training is already conducted on relevant topics. EPA could provide on-site professional staff to work with relevant subcommittees,

conduct training, and develop suitable policy and procedure language encouraging the selection of energy efficient technologies.

C. Budget

County Budget:

Budget data for 1995 is provided in the accompanying table. Operating expenses comprise slightly over 2% (59 million) of the budget. It was not possible to determine how much of this were energy costs. Nearly \$60 million dollars were spent on capital improvements, also representing slightly over 2% of total expenditures.

1995 Budget Data	\$ in thousands	Percent of County
Intergovernmental Payments	\$926,812.1	36.9%
Labor Costs	\$421,206.0	16.8%
Public Assistance	\$865,742.1	34.4%
Highway Construction & Maintenance	\$70,565.5	2.8%
Operating Expenditures	\$59,591.3	2.4%
Capital Outlays	\$58,016.3	2.3%
Miscellaneous	\$111,346.2	4.4%
Total	\$2,513,279.5	100.0%

Purchasing Department Budget:

The purchasing department processes approximately \$33 million dollars per year in purchasing requests. Of these, 80 to 90 percent are for products under \$15,000 dollars and thus are handled by a simple bid procedure within the purchasing department. The remaining purchasing requests are for over \$15,000 and require a formal bidding procedure which ultimately requires approval by the Commissioners court.

D. Roles and Responsibilities

The selection of energy efficient technologies is largely a function of two departments: Infrastructure Services and Purchasing. The organization and management of each department will be discussed in turn. It should be noted that the role of the purchasing department, as in many city and county governments, is largely administrative. The purchasing department works on a requisition basis, handling the bidding and vendor selection for purchased equipment. It should be noted that the department submitting the requisition selects the necessary technology and thus most influences the selection of energy efficient equipment.

Infrastructure Services:

The Bexar County Infrastructure Services Department provides a wide range of services from operation, maintenance, and repair of all County buildings that house judicial, administrative, and detention functions, to maintenance of roadways and bridges. It also operates and maintains the County's recreational system, which consists of nine parks and three civic centers. While working with other local agencies to support a safe environment for citizens to work and live, the Fire Marshal/Emergency Management Division protects life and property in unincorporated areas of Bexar County, and helps to provide a reasonably safe environment in which to work and live. The Executive Director of the department is Joe Garza. Budget approval of all sections is determined by the Commissioners Court and thus any major initiatives to implement energy conservation projects would require Court approval.

The selection of energy efficient technologies is largely a function of two departments: Infrastructure Services and Purchasing.

Facilities Maintenance

The Facilities Maintenance Division consists of two Sections: Building Maintenance and Parks & Grounds. The Building Maintenance Section is responsible for the maintenance, and repair of all County facilities, as well as maintenance and repair of adult and juvenile detention centers. County buildings include: the Bexar County Courthouse, Bexar County Criminal Justice Center, Courthouse Annex, Vista Verde Plaza, Adult Detention Center, Adult Detention Center Annex, Mission Road Juvenile Justice Complex, Medical Holding Unit, Mitchell Street Building, and various other County buildings. This section is responsible for the maintenance of over 100 buildings ranging in size from several hundred to several hundred thousand square feet.

The Parks & Grounds Section operates and maintains nine parks and three civic centers that comprise the County recreational system. Parks include: Bullis, Comanche, Covington, MacArthur, Mission, Orsinger, Pletz, Russell, and Rodriguez. The civic centers are: Harlandale, Navajo, and South San.

Wade Oldham is the Facilities Maintenance Manager. He has been influential in initiating a project with Texas A&M University to complete an energy audit of all county owned buildings in preparation for a potential Energy Savings Performance Contract which would also be in conjunction with the University. For the project to be initiated a budget approval of \$300,000 dollars must pass the Commissioners Court. Mr. Oldham intends to recommend the project for this year's budget cycle, and if it is approved energy audits could begin in late 2000. At this point approval and buy-in has been established with relevant personnel of the Infrastructure Services Section, including Executive Director Joe Garza.

However funding requirements are significant, and the county has not prioritized energy efficiency to date.

A potential project with Texas A&M University would conduct an energy audit of all county owned buildings in preparation for a proposed Energy Savings Performance Contract

Unfortunately, the Section has not had a history of implementing efficiency successfully. Mr. Oldham's predecessor was known for "draconian" efficiency measures which included cutting lighting wattage levels in offices and hallways creating a difficult and in some cases dangerous work environment. The measures generated significant complaints, and it seems energy efficiency as a term still is associated with negative connotations as interviews with several departments on the topic have initiated a recital of this same story.

The department has dedicated itself to a high efficiency chiller replacement program. Chillers are replaced as required, and 50 percent of existing chillers in all county buildings have been upgraded to date. The program is in its third year and will continue until all chillers are replaced with high efficiency models. Similar initiatives under consideration.

Public Works Division

The Public Works Division consists of four sections: Engineering, Environmental, Maintenance, and Traffic. The Engineering Section reviews and approves subdivision plats, manages road construction, performs field survey work, designs and reviews construction plans, conducts inspections at construction projects, and reviews, researches and acquires right-of-way.

Selection of bidders for these projects are primarily based on design and construction qualifications and previous experience. Qualifications specific to energy efficiency are not requested and are not considered within the selection process. However, this division would be involved in the energy audit project with Texas A&M if it develops and thus procedures related to bidder and technology selection may change.

Qualifications specific to energy efficiency are not requested and are not considered within the selection of Architects and Engineers.

The Environmental Section enforces all County environmental regulations, responsible for flood plain administration, nuisance complaints and abatement, and approves on-site sewerage facility applications and inspects those systems, and ensures environmental compliance of all County facilities. It has not been involved in energy efficiency or conservation.

The Maintenance Section maintains streets and roads, parkways along streets and roads, and drainage easements and structures in unincorporated Bexar County. It is not involved in building maintenance as this is under the purview of the Facilities Maintenance Section discussed previously.

The Traffic Section installs and maintains traffic control devices for County maintained streets and roads, and approves permits for driveways and utilities installed in County right-of-way.

E. Procurement Functions

Bexar County, like many municipal organizations, purchases a multitude of goods and services ranging from the technologies to toilet paper. The county's purchasing department consists of three functional areas: purchasing, fixed assets (one specialist), and administration. Purchasing is handled by six buyers including three contract specialists and a single office assistant. Buyers are assigned purchase requisitions based on a product type, for example computers, copiers or paper products.

As mentioned previously, the purchasing department works on a requisition basis. Equipment is usually specified by the "requesting" department rather than the purchasing department. Thus, buyers have no direct role in specifying equipment. Buyers are responsible for bidding, vendor selection, and contractual arrangements.

There has been no standardized training in the department regarding energy efficiency, and interviewers encountered only generalized knowledge on the subject. It is also relevant to energy efficiency knowledge level that only two of the 14 people in the office are college educated. This has important implications for the language used and the level of understanding assumed in EPA's Energy Star Purchasing Tool Kit. This points out the needs to provide on-site training to accompany any EPA rollout or tool kit introduction.

More importantly, there is little incentive for a buyer to go back to the department submitting the requisition to encourage a more efficient technology. Bids are evaluated based on purchase cost rather than lifecycle cost. In addition, there is often no incentive for the "requesting" department to select energy efficient technologies since this department is not directly influenced by energy bills.

[Page reserved for an organizational chart]

The Purchasing Process:

Guiding Regulations

All purchases are authorized by a purchase order prepared by the Purchasing Director or a buyer based on the request and needs of each City department. Depending on the purchase cost either a formal or informal bidding process is required. Purchases under \$15,000 only require an informal bidding process described below. In this case bids are evaluated and selected by the purchasing department. As has been previously mentioned, the majority of purchase requests are under \$15,000. Purchases over \$15,000 require a formal bidding process described in the following paragraph. Bid selection is ultimately made by the Commissioners Court with recommendations from the purchasing department.

Informal Bids:

For purchases costing \$999 or less competition is not required. Buyers may obtain quotes by telephone if considered necessary, such as for a first time purchase or when quote does not seem reasonable.

Purchases over \$1,000 but under \$4,999 do require a competitive bidding process, but the process may be completed by telephone in addition to fax or mail. In each case, three or more quotes are required.

Purchases less than \$15,000 but more than \$5,000 require an informal bidding process and can be made as soon as a formal purchase request is received. The purchase contract is awarded to the lowest responsible bidder conforming to specifications. Energy efficiency is not typically considered by the buyer or specifier. Depending on the specifications, urgency of purchase, and other technical requirements, bids may be requested in writing, by fax, or in person. Obtaining a quote by telephone must be pre-approved by the head of the purchasing department.

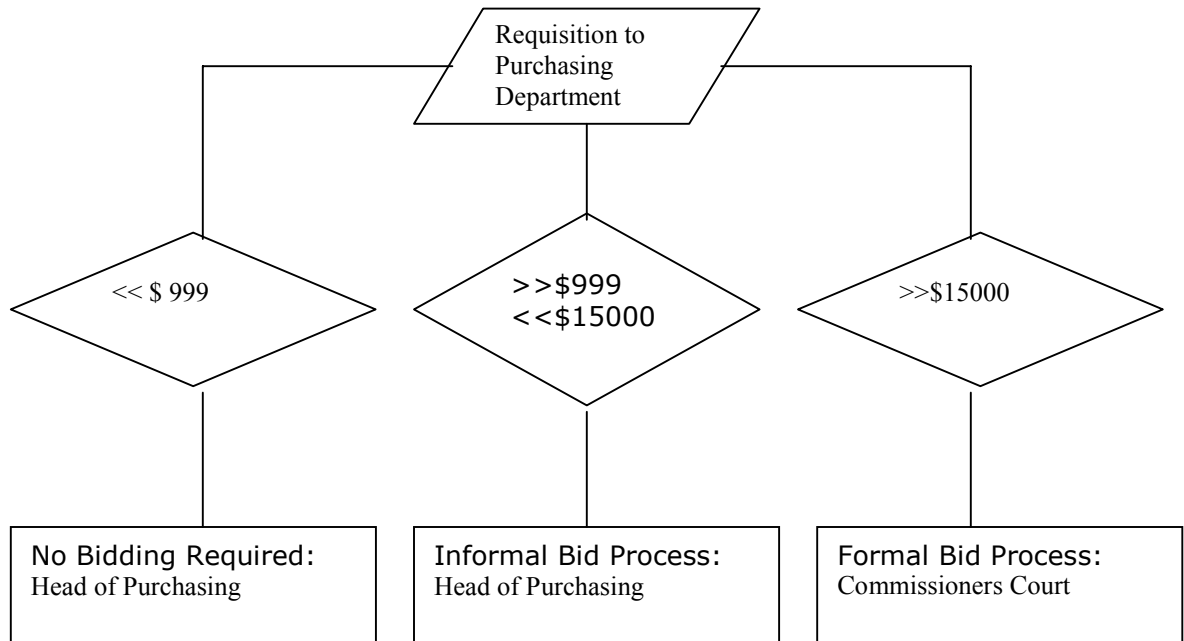
Materials, supplies or services valued under \$15,000 and provided by a single source may be bought by the Purchasing Director or a representative without completing the competitive bidding process. Sole sourcing requires justification by the requesting department and approval by the County Purchasing Agent. Section 262.024 (a) (7) and (c) of the County Government Policy is followed. In this case, less lead time is necessary.

In each of these cases a buyer may use local government contracts as sources. Brand name purchases require justification by the user and are approved by the City Purchasing agent or approval can be deferred to the Commissioners Court.

Formal Bids:

Purchases more than \$15,000 require a formal bidding process. Public notice will be given for a period of fourteen to thirty days. After bids are received, tabulations and recommendations of the Purchasing Director will be forwarded to Commissioners Court. The Court will award the purchase contract to the lowest responsible bidder conforming to specifications. Energy efficiency is not a typical consideration unless the specifying department develops relevant technical considerations.

F. Sign-off Responsibility and Thresholds – Flow Diagram



G. Conclusions

This case study illustrates the complexities that exist within a decentralized organization, such as the County Government. The decentralization of power creates little interest in matters that do not have an immediate or direct impact. Therefore, energy efficiency concerns, especially in the specifying and procurement process, are rarely raised.

This case study also illustrates the important role that energy champions can play in energy efficiency equipment selection and installation. When there is an energy champion in place, significant savings can be achieved. However, that success depends the willingness and abilities of individuals rather than as a result of specific policies and procedures.

This case study revealed the following major findings:

- ***There is little incentive to encourage energy conservation activities.***

Interestingly, none of the participating departments have any direct incentive to address energy conservation. Both the department submitting the requisition and the purchasing department never see energy costs. No incentive is provided for considering efficiency because of the “we don’t pay the utility bill” mentality that exists.

The municipal utility, CPS, pays 15% of their profit margin in lieu of taxes towards the City General Fund. This provides a direct disincentive to reduce energy costs, since a reduction of energy costs would be involve a related reduction of CPS profits.

- ***There is a strong disincentive for bulk purchasing initiatives.***

The low financial threshold of \$15,000 dollars before Commissioners Court approval is required encourages a “onesy-twosey “ approach to purchasing. The formal bid process involves significant delays in ordering of materials that would be avoided by submitting several lower cost requisitions rather than larger scale ordering. This approach involves several considerations regarding energy efficiency. First, standardization of equipment is discouraged and the related benefits of upward harmonization of efficiency are not recognized. Second, a holistic approach to conserving energy is discouraged. Many opportunities for understanding the interactions of equipment are obscured. Third, the apparent “pay off” of energy efficiency often appears negligible on smaller scale orders, in addition applicable rebates may never be explored.

- ***There is an Inter-agency disconnect.***

Since the actual ordering and specification of equipment is handled on a department by department basis, it is highly likely that one hand may not know what the other hand is doing. Opportunities for standardization are missed. Duplication of equipment is encouraged. True benefits and costs across the whole are often not recognized. Education regarding the selection of energy efficient equipment becomes a decentralized and thus much larger mission.

H. Recommendations

This case study also illustrates the real need there is for a comprehensive and concerted energy efficiency education and training initiative aimed at both the decision-makers and the specifiers within municipal organizations. The following recommendations are designed to assist both Bexar County as well as other municipalities facing similar concerns and issues.

- ***Energy Decisions Are Best Left to Energy Experts***

As this case study illustrates, employees in the purchasing positions are often just order takers for the specifying departments. If the County truly wants to develop a more comprehensive energy management plan, then it needs to recruit and cultivate energy experts.

One cost-effective strategy may be to rely on outside experts, such as contractors, instead of committing to a full-time, salaried employee. The easiest way to implement this recommendation would be to require firms submitting qualifications for design and/or construction support to report on previous experience with energy efficiency. In addition, inclusion of this experience could be incorporated into the Commissioners Court's selection criteria.

The resulting contracts should require support firms to evaluate energy efficiency alternatives in specific areas such as building shell (windows, insulation, roofing, etc.), HVAC selection, air handling, lighting (and day-lighting), hot water, and so forth.

The most successful municipal organizations have made an on-going commitment to energy efficiency. These organizations delegate the energy efficient purchase decisions to their internal experts. Alternatively, they need to hire at least one energy engineer who can provide this technical information as a resource for the municipal organization as a whole. The cost of this engineer's salary will be more than made up for in the reduced operating costs and maintenance needs.

- ***Energy Experts Need Organizational Authority for Decisions***

Another reason that Bexar County faces such difficulties with implementing a comprehensive energy efficient procurement policy is that it has no standards or guidelines in place to direct these activities.

One immediate suggestion would be to purchase Montgomery County's *Energy Design Guidelines*, as a way to identify potential savings by purchasing and installing energy efficient equipment.

However, standards without enforcement are meaningless, even in organizations with the best intentions to save money. Therefore, the City of San Antonio also needs to establish an energy policy that allows the energy experts the ability to monitor and enforce these standards. Unfortunately, that endorsement can only come from the Commissioners Court.

- ***Develop Energy Champions***

Since there is no written policy to consider energy efficiency in new construction, expansions, or general purchasing requests it is dependent on pioneering personalities or contractors to recommend improvements. As contractor and design support are not qualified based on energy efficiency awareness, there is no encouragement of energy conservation on the contractor level.

Procurement officials are overwhelmed with information and demands on their time, and this trend is likely to increase. Therefore, it will not be enough to just develop and deploy energy efficiency training materials, such as the Energy Star Purchasing Tool Kit, but it will also be necessary to create a support system to disseminate this information within each targeted organization.

Essentially, Bexar County, working with CEE, needs to cultivate "energy missionaries" to spread the word about the benefits of energy efficient purchasing throughout the organization. This would ensure that any gains made in this area are lasting and long-term. By spreading the word about energy efficiency, and educating procurement officials as well as decision-makers, this will lead to a greater understanding of, and appreciation for, energy efficiency that will out-last the tenure of any elected official or political trend.

- ***Bring procurement officials to the table. Educate them on the benefits of sampling procurement processes, better equipment reliability, and exceeding minimum codes (in other words ensuring compliance) rather than focusing exclusively on energy savings.***

Procurement officials are not the ultimate equipment purchasers. Nor should they be. Rather, they should be viewed as a resource along the way. However, they do not want or have the authority to actually influence the purchase decisions.

Moreover, procurement officer's chief concerns are not energy efficiency, but rather other issues such as first cost, product availability, and delivery times. The purchasing department has the capacity to provide coordination and "the big picture" yet they traditionally view their responsibility as finding the lowest cost bidder. Selection of equipment and contributing to energy conservation is not viewed as a part of the job description.

Therefore, energy efficient equipment needs to be presented to procurement officials in the language and terms they understand, thus focusing on its benefits to improving overall performance and longer life cycle, rather than focusing exclusively on energy savings that are of little concern or interest to them.

- **Investigate standardization and bulk purchasing opportunities.**

Bexar County could reap immediate benefits by establishing standardization programs for energy related purchased materials and equipment. Bexar County should use the ENERGY STAR Purchasing Tool Kit as a reference point in developing efficiency standards for certain items such as copiers, computers, lighting, HVAC, and so on.

Another strategy to consider is approaching the Regional Councils, or COGS, as a potential bulk purchasing organization. This would build upon previous work conducted by CEE. Since COG already represents Texas counties, this would provide an excellent opportunity to develop statewide purchasing initiatives of energy efficient equipment. Led by CEE, this arrangement could lead to significant gains in both educating as well as achieving energy efficient equipment purchases throughout Texas.

- ***Develop an energy conservation reward program.***

It seems like such a simple idea, but it could lead to long-term savings. This reward program could be simply recognition awards, or monetary. For example, the city could estimate savings realized by implementing an idea, and pay just 1% of the realized savings back to the employee. This approach would give procurement officials a "vested interest" in evaluating and selecting energy efficient equipment.

Another related strategy would be to direct a portion of CPS annual payment to the General Fund towards Energy Conservation retrofits. Retrofits that directly reduce the cooling load, for example, would benefit CPS in reducing peak loads and benefit the City in reduced energy costs. Another approach would be to involve the County government in initiating a rebate program that they would be lead participants in. Such a rebate program might be best directed toward County businesses rather than residents.

- ***Train and educate procurement officials***

A critical element to the long-term success of any efficiency initiative is to establish regular training programs on energy conservation within significant departments. Programs might include recognition awards, short case studies, and sharing information about successes within other departments.

This recommendation would further institutionalize energy efficiency into the decision-making process, by making it part of the County's formal training program. Just as employees need to receive training about new codes, new technologies, and new legal requirements, they should also receive training on a regular basis about changes and advances in energy efficiency. This would also provide an excellent opportunity for the CEE and the EPA to monitor Bexar County's progress and success with its ENERGY STAR Purchasing Tool Kit.

- ***Modify Annual Contracts to include ENERGY STAR purchasing language.***

Lastly, Bexar County should take advantage of the Purchasing Tool Kit now available. One suggestion may be to hold a formal project debriefing with the key officials interviewed in this case study, and use that as an opportunity to formally introduce the ENERGY STAR Tool Kit to decision-makers and procurement officials alike.

(Even though, the tool kit was disbursed to some officials within the Bexar County, it was difficult to receive feedback regarding its effectiveness.) By leveraging the relationships developed in this case study, this hands-on approach may be the best way to introduce the tool kit to Bexar County. This would also create a perfect opportunity to encourage the City to adopt EPA's model procurement language as it modifies or updates purchasing contracts.

APPENDICES

City Level Officials Interviewed:

Joe Garza	Executive Director, Infrastructure Services
Wade Oldham	Director, Facilities Management
Mike Martin, PE	Director, Public Works
Charles Eades	Director, Purchasing
Jim Hogland	Purchasing