

THE CITY OF SAN ANTONIO, TEXAS

A Case Study of Energy Efficient Purchasing Challenges

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EXECUTIVE SUMMARY

San Antonio is the eighth largest city in the United States and boasts one of the fastest growing metropolitan areas. It is located in South Central Texas. Its dynamic and diverse economy is a healthy mix of business services; a rapidly growing medical and health delivery sector; a diversified manufacturing sector; and, a well established convention and visitor industry.

San Antonio was selected a site for this case study because it illustrates both the challenges and opportunities that face local governments around the United States. Like many other cities across America, San Antonio is struggling to balance the needs of a booming economy with increased concerns for energy efficiency and pollution controls.

Three departments significantly influence the purchase of energy efficient technologies: the Capital Improvements Program, Facilities Management, and Purchasing & General Services. In San Antonio, the department **submitting** the requisition selects the necessary technology and thus most influences the selection of energy efficient equipment.

This case study illustrates problems endemic to municipalities, specifically the disconnect that exists between the “energy experts” and the “energy purchasers.”

While the specifiers have the expertise to identify appropriate equipment, the 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. There is no incentive for a buyer to go back to the department submitting the requisition to encourage a more efficient technology. In addition, there is often no incentive for the “requesting” department to select energy efficient technologies since they do not pay the energy bills.

This case study also illustrates the problems that many municipalities’ face when they own and operate a 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 at rates below the state and national average. Since the city owns the utility, 14% of gross revenues are paid to the City of San Antonio in lieu of taxes. In 1998, CPS paid \$144.6 million, approximately one third of the City’s total budget. Therefore, any significant reduction of energy consumption would decrease utility profits, consequently reducing a sizable portion of the City’s annual income. ***This policy creates a built-in disincentive on the City level for energy efficiency improvements.***

While San Antonio has achieved some laudable successes, this case study illustrates the vital role that energy champions play in increasing awareness of energy efficient

purchasing practices. The Facilities Department has been the most innovative department within the City of San Antonio. This department, led by a true “energy champion” has installed energy management systems, and instituted a centralized warehouse system of maintenance equipment including lighting and other energy related equipment. The centralized system facilitates greater standardization of equipment, tighter control of technology selection, better monitoring of usage and replacement rates, and bulk purchasing discounts.

This case study also highlights a new procurement opportunity that may exist throughout Texas. Regional councils or “COGs” 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. San Antonio 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.

Programs 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 council’s effectively reach top level county and city government and purchasing officials; and training is already conducted on relevant topics. EPA could provide on-sight professional staff to work with relevant subcommittee’s, conduct training, and develop suitable policy and procedure language encouraging the selection of energy efficient technologies.

EPA’s State and Local Purchasing Initiative could be made even more effective by developing strategies to work with COGS throughout Texas.

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 the City of San Antonio, as well as other municipalities facing similar concerns and issues.

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

As this case study illustrates, those City employees in the purchasing positions are often just order takers for the specifying departments. If the City 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 City Council's selection criteria.

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

Another reason that the City of San Antonio 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 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. 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 City Council

- ***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 such as Bill Washkoske 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.

In essence, the City of San Antonio, 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 one public 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.

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.**

The City of San Antonio could reap immediate benefits by establishing standardization programs for energy related purchased materials and equipment. The City of San Antonio 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. Such standards could be developed by Purchasing with cooperation from Facilities Maintenance where appropriate.

Another strategy is to approach the Regional Councils, or COGS, as a potential bulk purchasing organization. This would build upon previous work conducted by CEE. Since COG already represents the cities of Texas, 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.***

An energy conservation 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. Or involve the City government in initiating a rebate program (“Green in San Antonio”) that they would be lead participants in. Such a rebate program might be best directed toward San Antonio businesses rather than residents.

- ***Train and educate procurement officials on an on-going basis.***

A critical element to the long-term success of any efficiency initiative is to establish regular training programs on energy conservation within significant departments. Such departments might include purchasing, public works, City Council members, and employees in major buildings such as City Hall or the Convention Center. 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 City'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 the City of San Antonio's progress and success with its ENERGY STAR Purchasing Tool Kit.

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

Lastly, the City of San Antonio 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.

By leveraging the relationships developed in this case study, this hands-on approach may be the best way to introduce the tool kit to City of San Antonio. 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.

In summary: the City of San Antonio typifies the barriers and opportunities that exist for capitalizing on EPA's Energy Star Purchasing Initiative. However, this program will only be successful if the initiative provides direct and tangible benefits to procurement officials and energy specifiers alike.

A. Background and Perspective

San Antonio is now the eighth largest city in the United States and boasts one of the fastest growing metropolitan areas. It is located in South Central Texas. 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. Diversity is the strength of the economy and reflects the community-wide commitment to business development. Bexar County, one of the 254 counties in Texas, includes the San Antonio Metropolitan Area. In 1996, the population of 1,313,975 ranked 3rd in the State.

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The largest industries 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 that increased 8.4 percent. In 1996, Bexar had a total personal income (TPI) of \$28,097,558*. 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 City, and that information derived from this study would apply well as a model to other areas across the country.

San Antonio Demographics
Population – 1,313,975 (1996)
Geographic Area- 1,247 Sq. miles in South Central Texas
Government Employees – 116,700 (1994)
Number of City Buildings - 280 (4.5 mill. Sq.Ft.)
Average Electric Rates- .038/KWH (Industrial Rate)
Average City Electric Rates- .055/KWH

Prudent fiscal management has postponed a property tax hike. The tax rate remains at 57.979 cents per \$100, which places San Antonio with the second lowest rate of the nine major Texas cities.

* All income estimates are in thousands of dollars.

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.

Because the utility is city owned, 14% of gross revenues are paid to the City of San Antonio in lieu of taxes. In 1998, CPS paid 144.6 million, approximately one third of the City's total budget. The CPS payment adds to the City General Fund and goes towards fire and police protection, parks and recreation, libraries, etc. It should be noted that this policy creates a built in disincentive on the City level for energy efficiency improvements. Even a 20% reduction of energy consumption would decrease utility profits, consequently reducing a sizable portion of the City's annual income.

14% of CPS gross revenues are paid to the City of San Antonio in lieu of taxes, approximately one third of the City's total budget. This policy creates a disincentive for the City to initiate energy conservation programs.

The average electricity rate for industrial users is \$0.038 per KWh and can be as low as \$0.031. The City government, as is discussed later in this report, negotiates rates for individual buildings. The average rate for the City is \$0.055 per KWh although individual building rates range from \$0.042 per KWh to \$0.068 per KWh.

Due to recent developments, CPS anticipates increased competition and is anxious to present itself in a favorable light to the city. The City Government is thus in an excellent position to negotiate conservation strategies that would benefit both the city and the utility.

B. Organization, Staffing Levels, Primary Function

There are three departments that significantly influence the purchase of energy efficient technologies. These departments are the Capital Improvements Program, Facilities Management, and Purchasing & General Services. The Capital Improvements program influences the specification of energy equipment for new construction and major expansions such as the expansion of the Convention Center (see following text box). Facilities Management addresses building retrofits and equipment replacement. 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.

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Capital Improvements Program

The Capital Improvements Program Management Division of the Public Works Department is responsible for supporting the comprehensive implementation of the City's Capital Improvements Program, including streets/drainage and facility design and construction. There are five divisions of the department: Contract Administration; Project Planning & Coordination Real Estate; Agenda Preparation; Construction Testing & Inspections; Utility Coordination.

The implementation of this overall program utilizes partnerships, bringing the City together with citizens, public agencies, private consultants, and contractors. Additionally, the Division provides support to other Departments wishing to contract for design or construction services. These include the Alamodome, Aviation, Parks, Community Initiatives, Housing and Community Development, Library facilities, and the Convention Center Expansion highlighted above.

Major Expansion of San Antonio Convention Center

The city is completing construction on a major expansion of the San Antonio Convention Center. This expansion of meeting and exhibit space has incorporated several energy efficient technologies. As a part of our investigation we interviewed the City Architect, Mark Kimble who was responsible for the design of the expansion and toured the construction site. Mr. Kimble was pleased to tell us of several energy efficient measures utilized in the project. For example, innovative reflective roofing is expected to reduce the cooling load a full 10% given the large surface area and hot climate. The roofing will be installed at no additional cost due to available rebates and expected savings. In addition, windows of low-e glass and metal halide lighting will yield significant additional savings. Limited options for lighting efficiency gains were available given the intensive and unique needs of exhibit space. No written policy is in place to consider energy efficiency, all of these applications were driven by the prime contractor 3-D International. This points out the importance of considering the energy conservation background of contractors to insure appropriate measures are considered.

[This page is reserved for an organization chart of the City of San Antonio offices and divisions that is currently in hard copy. It will be inserted into the hard copy version of the final report.]

Contract Administration Section

The Contract Administration Section is primarily responsible for the procuring of professional architectural and engineering design services and for the contracts associated with both the design element as well as construction. In this endeavor City staff works with the design community in order to ensure efficient levels of outreach in developing and delivery Request for Interest Statements for design services.

This Section then follows this with the distribution of the submittals through the Architectural / Engineering Selection process. Selection of bidders is 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. Once the selection process is complete for design services, or bids are received for construction items, contracts are developed which will control scope and value of services to be performed. This Section is responsible for delivering and execution of contracts and ensuring that all required documents are secured.

Selection of bidders is primarily based on design and construction qualifications and previous experience. Qualifications specific to energy efficiency are not explicitly requested or considered within the selection process.

Agenda Preparation

The City of San Antonio City Council meets in a regular weekly session to consider an organizational agenda of items to be discussed which require action by Council. The Agenda Preparation component of the Capital Programs Division is responsible for coordination of all items submitted by the Public Works Department. These items include preparation of Briefing Memorandum and all necessary documentation required in coordination with other City Departments.

Construction Testing & Inspection

This unit is comprised of approximately 60 Material Testing and Construction Inspection personnel whose role is to provide field technical verification during construction. This process is critical as it provides construction accuracy in the field relative to the design plans developed by the consultant engineers. This check and balance process provided is applied not only to verify construction according to design but also to perform material testing on those materials supplied by contractors as specified. This department is discussed because it would play a crucial role in insuring that energy efficient equipment was operating according to specification.

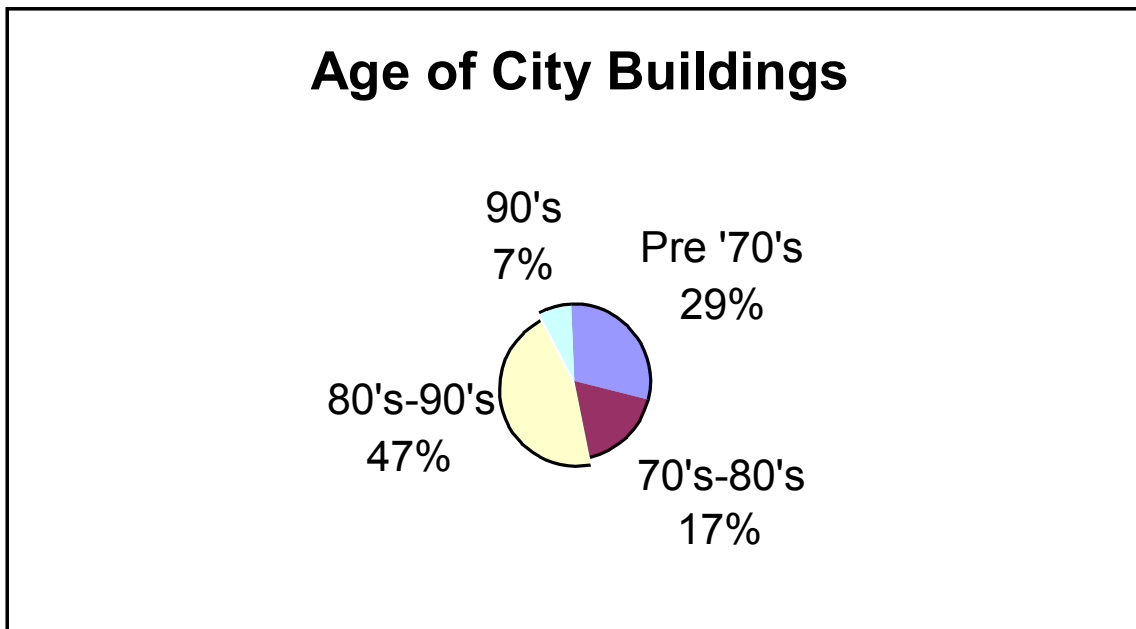
Utility Coordination

This effort supports ongoing partnering with consultants, contractors, and utility agencies during project development and implementation. The primary element of this department is coordination with utility agencies to ensure potential conflicts are

addressed to the extent possible prior to construction. This coordination continues during construction with fourteen different Utility Agency Coordinators. This effort serves to minimize as much as possible, any inconvenience to the citizens. Additionally, this effort serves to eliminate potential incremental rate increases due to utility conflicts.

Facility Maintenance

The Facility Maintenance Department is headed by Bill Washkoske and is responsible for the ongoing maintenance and retrofit of 280 city buildings comprising 4.5 million square feet. The department does not manage buildings operated by Parks and Recreation, Aviation, the Convention Center, and the Alamodome. Parks and Recreation operates over half of the City buildings, approximately 440 facilities. Many of these are very small (100-1000 sq. feet, such as public restrooms), and/or are not energy intensive such as storage facilities, pavilions, etc. The department employs 135 people including six for the ordering of supplies and four administrative personnel.



Largely due to the pioneering influence of Mr. Washkoske, who has been interested in energy efficiency since 1987, the department has initiated several conservation programs. The impact of these programs can be noted on the chart on the following page, illustrating electricity consumption from 1995-1998.

Mr. Washkoske initiated efforts to obtain Federal Funds to improve building efficiency and was finally successful. In 1987, a Federal grant was received to install three ECMS. There are a total of nine ECMS in place today, monitoring and managing energy consumption in a total of 1.2 million square feet. Over 40 buildings have been selected

for on-going monitoring of energy consumption and energy reductions. Electricity and gas consumption and costs have been tracked since 1995. Thirteen of the facilities have recognized electricity reduction of over 10%. Nineteen facilities have reduced the consumption of gas over 10%. Half of the facilities have successfully negotiated reduced electricity rates; nearly all the facilities have maintained stable rates.

Due to the efforts of an energy champion, the City was able to reduce energy consumption in 13 facilities by more than 10 percent.

In addition, a centralized warehouse system of maintenance equipment including lighting and other energy related equipment has been established for all buildings managed by the department. The centralized system facilitates greater standardization of equipment, tighter control of technology selection, better monitoring of usage and replacement rates, and bulk purchasing discounts. It should be noted that such

A centralized warehouse system of maintenance equipment has been established for all buildings managed by the department. The system facilitates standardization of equipment, tighter control of technology selection, better monitoring of usage and replacement rates, and bulk purchasing discounts.

centralized warehouses encourage lighting and other retrofits to be completed to bring all buildings up to a standardized level of efficient equipment. For example, the heating equipment in many buildings is being converted to high efficiency gas boilers from Lochinvar. One facility recognized savings of 11,000 CCF (approximately 50%) in the first full year of operation. Space heating in the area is primarily gas due to the low rates compared to electricity. Also, there is an on going lighting

retrofit of five police substations and training academy totaling approximately 75,000 sq. ft.. The city participates in the EPA's Green Lights program standards and maintains current Version 2 specifications.

[This page is reserved for a line chart of electricity consumption from 1995 – 1998 by month. It indicates significant reductions in consumption each year. The hard copy version was made available by Bill Washkoske and will be included in the final report]

C. Annual Capital and O&M Budgets

The proposed budget for San Antonio for the next fiscal year is set at \$1.07 billion. The budget includes such items as sidewalks, streets, inner-city redevelopment, neighborhoods, and public safety and customer service. Highlights related to capital expansions and improvements include:

- \$1.22 million to implement the recommendations of the community-based Community Revitalization Action Group (CRAG) that focuses on stimulating redevelopment in the inner city.
- \$10.48 million to establish an Inner City Revitalization Fund for neighborhood revitalization, improvement, and maintenance.
- \$549,370 to implement additional recommendations of the City Master Plan policies, focusing on growth management, economic development, neighborhoods, community services, natural resources and urban design.
- \$11.323 million for services, construction and renovation of existing fire stations and capital facilities and equipment.
- \$1.077 million to improve neighborhoods including enhancements for the Code Compliance Department, additional staff in the Planning Department and implementation of development services, code compliance and business assistance service reviews.
- An Environmental Fee established to fund \$294,000 in program improvements.

Capital improvement projects are funded through three mechanisms: as Community Development Block Grants (CDBG) projects, General Obligation Bond (G.O. Bond) projects and Metropolitan Planning Organization (MPO) projects.

Capital improvement projects are funded through three mechanisms: as Community Development Block Grants (CDBG) projects, General Obligation Bond (G.O. Bond) projects and Metropolitan Planning Organization (MPO) projects. The goal of the CDBG Program is to preserve and develop urban communities and is funded through the U.S. Department of Housing and Urban Development (HUD) and is administered by the City's Department of Housing and Community

Development. Projects are recommended by the public, community organizations and

elected officials. The CDBG program began in 1974 and the City applies for funding each year for this program. City Council selects the projects and funding levels of the projects after public input. Funding for infrastructure repairs is between \$10 million and \$12 million annually.

G.O. Bond projects are the result of special elections in which citizens decide whether bonds will be used for these construction projects. Currently, there are 64 projects funded for improvements from 1985, 1987, and 1994 approved G.O. Bonds. The last special election in 1994 approved \$125 million over a five-year period for streets and drainage projects. Projects for this program are selected by City Council.

MPO projects are jointly funded by the Federal Government and the City of San Antonio and administered by the Texas Department of Transportation (TxDOT). Projects are selected for each fiscal year three years ahead of the planned construction date from projects submitted by the public, community organizations, local elected officials and recommendations by City staff agencies. These projects are evaluated by the MPO for merit and recommended to the Transportation Steering Committee of the MPO for the development of the Transportation Improvement Plan. Typically, the MPO receives recommendations for over \$100 million worth of projects annually and funding is available for approximately \$23 million each year.

D. Highlight of the Procurement Function

The purchasing department consists of eight buyers underneath a division head, Orlando Dominguez. Each buyer is assigned a variety of purchased goods as outlined below. 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.

City Purchasing Department

Orlando Dominguez

Purchasing Agent

(210)207-4045

Division Head

Peggy Riley

Senior Buyer

(210)207-4047

Automotive and heavy equipment, fire and police equipment, foods, fuels, janitorial equipment and supplies.

Steve Garcia

Buyer

(210)207-4044

Computer hardware and software, safety equipment & supplies and disposition of material.

Barbara Corliss

Buyer

(210)207-4053

Electrical supplies, hand tools, shelf hardware, building material, security guard, janitorial, sprinkler, plumbing and pest control services.

Veronica Solis

Buyer

(210)207-4062

Office supplies, janitorial, printing, forms and fine paper awards, novelties and uniforms.

James Horst

Buyer

(210)207-4048

Furniture, photographic & video equipment, swimming pool supplies, sprinkler equipment, water treatment supplies & services, horticultural & fertilizers.

Vacant

Buyer

(210) 207-4046

Construction, paint, roof, air conditioning, elevators, floor covering material & equipment, lawn maintenance service & equipment.

Jesse Martinez

Buyer

(210)207-7024

Arts and craft supplies, medical equipment and supplies, library, books and publications & office supplies.

Bruce Martin

Buyer

(210)207-4043

Copiers, drapes, curtains and blinds, flags and signs, microfilm equipment, office equipment, parking and traffic equipment, & theater equipment.

There has been no standardized training in the department regarding energy efficiency, and interviewers encountered only generalized knowledge on the subject. More importantly, there is no 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 life cycle cost. In addition, there is often no incentive for the "requesting" department to select energy efficient technologies since they do not pay the energy bills.

Annual contracts are utilized for some standard purchases and are re-bid annually, such as a contract with Johnson Controls. Annual contracts provide an ideal opportunity for the specification of efficiency standards due to strong leveraging power and stable contract language. Also, the city has a cooperative agreement with the state of Texas and purchases some items through existing GSA agreements. These GSA agreements are written according to energy star specifications. For example, the city participates in GSA agreements with Compaq and Gateway for computer and related equipment. Similar contracts are utilized for lighting. The city participates in the EPA's Green Lights program standards and maintains current Version 2 specifications.

There is no incentive for a buyer to go back to the department submitting the requisition to encourage a more efficient technology.

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".

San Antonio 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. San Antonio 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 twenty-four 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 subcommittee's devoted to purchasing procedures, standardization of supplier's and technologies, developing partnerships with supplier's etc. 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 council's 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 subcommittee's, conduct training, and develop suitable policy and procedure language encouraging the selection of energy efficient technologies.

E. Findings - Procurement Process

Guiding Regulations

All purchases are authorized by a purchase order prepared by the Purchasing Director or a representative based on the request and needs of each City department. Purchases costing \$50 or less may be made by requesting Department Head or a representative without a purchase order if payment is made from petty cash. 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. Purchases over \$15,000 require a formal bidding process described in the following paragraph. Bid selection in this case is ultimately made by the City Council with recommendations from the purchasing department.

Informal Bids:

Purchases less than \$15,000 but more than \$50 require an informal bidding process and can be made as soon as bids are received. The purchase contract is awarded to the lowest responsible bidder conforming to specifications. Bids may be requested in writing, by phone, by fax, or in person. The average bid period is five to ten days. Informal bids are opened in the Purchasing Office at 10:00 a.m., Monday through Friday. 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. In this case, less lead-time is necessary.

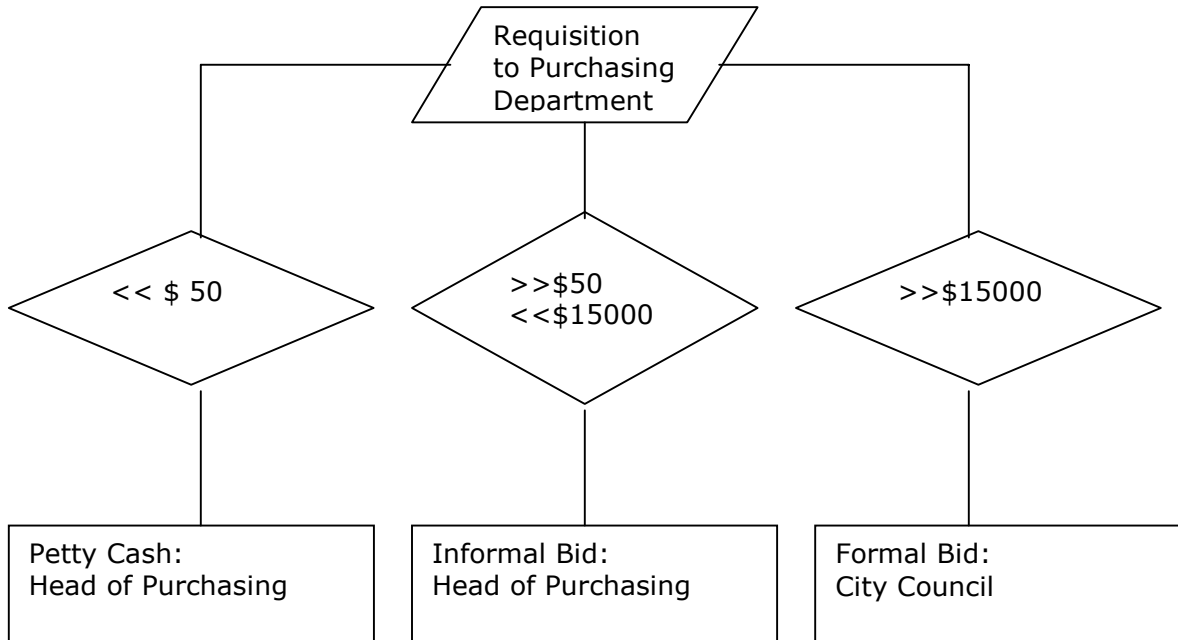
Formal Bids:

Purchases more than \$15,000 require a formal bidding process. Complete detailed specifications and forms will be mailed to all vendors on file for the particular materials or services. Public notice will be given for a period of 14 to 30 days. After the opening of bids, tabulations and recommendations of the Purchasing Director will be forwarded to City Council through the City Manager. The City Council will award the purchase contract to the lowest responsible bidder conforming to specifications. All bid openings are public.

Annual Contracts:

Materials, supplies or services continually used will be posted in a formal bid process. City Council will award a term contract to the lowest responsible bidder.

F. Sign-off Responsibility and Thresholds – Flow Diagram



G. Conclusions

The City of San Antonio illustrates the difficulties that exist when there is a “disconnect” between equipment specifiers and equipment purchasers. This case study also illustrates that procurement initiatives to encourage the purchase of energy efficient equipment will need to target decision-makers in the City government, as well as procurement officials.

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 City Counsel 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.

I. 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 the City of San Antonio, as well as other municipalities facing similar concerns and issues.

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

As this case study illustrates, those City employees in the purchasing positions are often just order takers for the specifying departments. If the City 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 City Council'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. Since a construction inspection team has been established, if given training, they could insure that conservation measures specified in the design were implemented.

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 the City of San Antonio 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 City Council

- ***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 such as Bill Washkoske 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.

In essence, the City of San Antonio, 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 one public 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.**

The City of San Antonio could reap immediate benefits by establishing standardization programs for energy related purchased materials and equipment. The City of San Antonio 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. Such standards could be developed by Purchasing with cooperation from Facilities Maintenance where appropriate.

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 the cities of Texas, 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. Or involve the City government in initiating a rebate program (“Green in San Antonio”) that they would be lead participants in. Such a rebate program might be best directed toward San Antonio 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. Such departments might include purchasing, public works, City Council members, and employees in major buildings such as City Hall or the Convention Center. 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 City’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 the City of San Antonio’s progress and success with its ENERGY STAR Purchasing Tool Kit.

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

Lastly, the City of San Antonio 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 City of San Antonio, 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 City of San Antonio. 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 for Study

Orlando Dominguez – City Purchasing Manager

Bill Washkoske – Manager, Building Maintenance and Public Works

Gabriel Perez – Manager, Capital Improvements

Elena Castillo – Capital Improvements Division

Mark Kimble – City Architect for Convention Center Expansion