STATE of MAINE

ELECTRICAL ENERGY

CONSERVATION PROGRAM

REPORT

prepared by:

Bureau of Public Improvements

January 1989

I N D E X

INTRODUCTION

As a consequence of L.D. 2360, introduced during the previous years legislative session, Title 5, Section 5014 of the Maine Revised Statutes was enacted, giving the Bureau of Public Improvements the responsibility of

1. developing a specific ongoing program to conserve electrical energy in State facilities,

2. providing an inventory on categories of use of electrical energy , i.e. lighting, heating, cooling, and other uses;

3. examining the opportunities for improving the efficiency of electrical energy use,

4. developing an aggressive schedule, consistent with available funding, to take advantage of conservation programs by public utilities which are cost effective to the State, and

5. reporting annually to the Legislature on progress in reducing or conserving electricity.

This report responds to the requirements of Section 5014 and outlines the Bureau's progress within each designated responsibility. As only a brief time has elapsed since enactment of the law, little can be said regarding actual reduction in energy usage beyond that which was presented in Bureau testimony to the Energy and Natural Resources Committee hearing on L.D. 2360. However, this report will document sufficient progress to emphasize the Bureau's commitment to accomplishing the objectives of the statute.

I. PROGRAM DEVELOPMENT

A. Historical Perspective

1. Purpose

The following background is presented to enable:

a. a better understanding of the reasons for the proposed structure and organization;

b. an understanding of the limitations and consequences which restricted staffing and resource levels have imposed;

c. development of a context within which interested parties can comment about proposals for the future.

2. History

The Energy Audit Division was formed within the Department of Finance and Administration as a reaction to the energy crisis of the mid 1970's. By 1978, it consisted of 14 energy auditors and a supervisor who were hired on a temporary basis and funded largely through Federal Grant monies to conduct audits for Maine's public schools and State facilities. In addition to performing audits, they administered or implemented projects both in public schools and State facilities based on the audit recommendations developed and funded through State Bond Issues totalling $10,000,000.

The principal recommendations identified and implemented reflected the concerns at the time, i.e. those which reduced oil consumption. When the audits were conducted, oil expenditures in State facilities were twice that for electricity usage.

With the completion of all public school (but only 30% of State building) audits in 1980, Federal monies were expended and all temporary positions were phased out. In March of 1980, the Legislature authorized an additional $7,000,000 in bond issues for energy conservation. Concurrently, as a result of the Governor's Management Task Force, May 1980, recommendations on Energy Management in Maine State Government, a Division of Energy Management, was established within the Bureau of Public Improvements. A total of four positions were recommended, but only three were ultimately authorized in 1981.

The Legislative intent and justification made by the Task Force for the creation of positions within the Bureau was "to provide the capability for conducting on-site energy reviews and monitoring of all major State buildings" upon the premise that "without this monitoring program, the full savings potential from energy upgrading projects will not be realized on a continuing basis". The reality was that this much smaller group now had the responsibility for completing the audit analyses of State buildings and

administering and/or implementing over 1100 discrete energy projects costing in excess of seven million dollars.

By 1986, all previous bond issue funds for energy conservation had been committed. Under L.D. 2243 of the second session of the 112th Legislature, a new bond issue for six million dollars was proposed, but did not gain passage. A capital request for two million dollars in energy conservation funds during the last biennial budget was included with various maintenance items in a bond issue which failed.

In 1986, the Energy Management Program Director resigned. Subsequently, a position within th Energy Division was eliminated leaving two positions to fulfill the functions.

In 1987, a $250,000 balance of funds was matched by a Federal Grant administered by the Office of Energy Resources. In late 1987, the Bureau received $455,000 from the Stripper Well Over-Charge Fund and in mid 1988 successfully applied for re-allocation of $1,000,000 to complete previously identified conservation measures.

3. Conclusions and Recommendations

Due to the source and nature of its funding over the years, the Energy Management Division tended to focus on project management rather than energy management. Even current expectations for the Division bear only limited resemblance to the duties suggested by the Governor's Management Task Force. Accordingly, the Division has not developed a plan or structure within energy management focus, and should move to do so at this time.

Such an approach would require the Division to avoid becoming excessively involved in handling project details to the detriment of attention to larger policy issues. In any event, the current staff size is not adequate to allow a project management orientation.

Reduced staffing, declining support for funding and the present additional requirements of Title 5, Section 5014, all dictate that the Division re-evaluate it's mode of operation in order to:

a. be more responsive to the dynamics of energy and use, costs, new conservation technologies and Legislative mandates;

b. firmly establish the framework of our responsibility to avoid future failed expectations; and

c. re-establish confidence in the Bureau's ability to effectively assess and address energy efficiency in State facilities.

This report develops, in the following sections, the outline of a comprehensive program which addresses planning, responsibilities, training, audits, budgets, and implementation. The report specifically avoids developing a project oriented schedule at this time.

Although the proposed program primarily addresses electrical energy conservation and efficiency improvement, it may subsequently serve as the

shell for a more complete energy management program. The Division will organize this effort, but its success will require the active effort of all participants, including the Legislative and Executive branches of State Government.

B. PLAN ORGANIZATION

The Bureau of Public Improvements will administer the conservation program, with the assistance of all State agencies and utilities, to:

1. establish goals, objectives, milestones and indicators of program performance;

2. assign responsibility for the various elements of the program;

3. survey, collect and maintain energy consumption information;

4. identify conservation and efficiency improvement opportunities;

5. evaluate energy conservation measures and financing alternatives;

6. coordinate all activities with public utilities with regard to audits, rebates or financing mechanisms;

7. initiate requests for funds from the Legislature as needed;

8. direct the implementation of changes and improvements; and

9. report annually to the Legislature.

Figure 1 exhibits a flow chart of the program. This report serves as a delineation of the first element of this program. Other elements of the program are in progress and will be discussed in further sections of this report.

C. GOALS AND INDICATORS

In its initial form, L.D. 2360 proposed a 25% increase in energy efficiency. As passed, the law stipulates a reduction in electrical energy use consistent with the Office of Energy Resources Comprehensive Plan which aims for a 10% decrease from 1985 levels by the year 1990.

The Bureau of Public Improvements has concluded that a reduction of 10% by 1990 cannot be accomplished. As an alternative, the Energy Management Division proposes a goal of 15% reduction from the current baseline year usage for State owned buildings within the next 5 years (1993).

While establishing a realistic goal is a relatively simple task, developing accurate indicators of achievement of the goal is not. Examination of past utility records and common knowledge show that our increased rates of consumption over time are not simply due to poor management, inefficient equipment or lack of controls. Proliferation of desk top computers, mounting acquisitions of air conditioning units, growth in space requirements in State Government, and indoor air quality concerns, which necessitate expanded

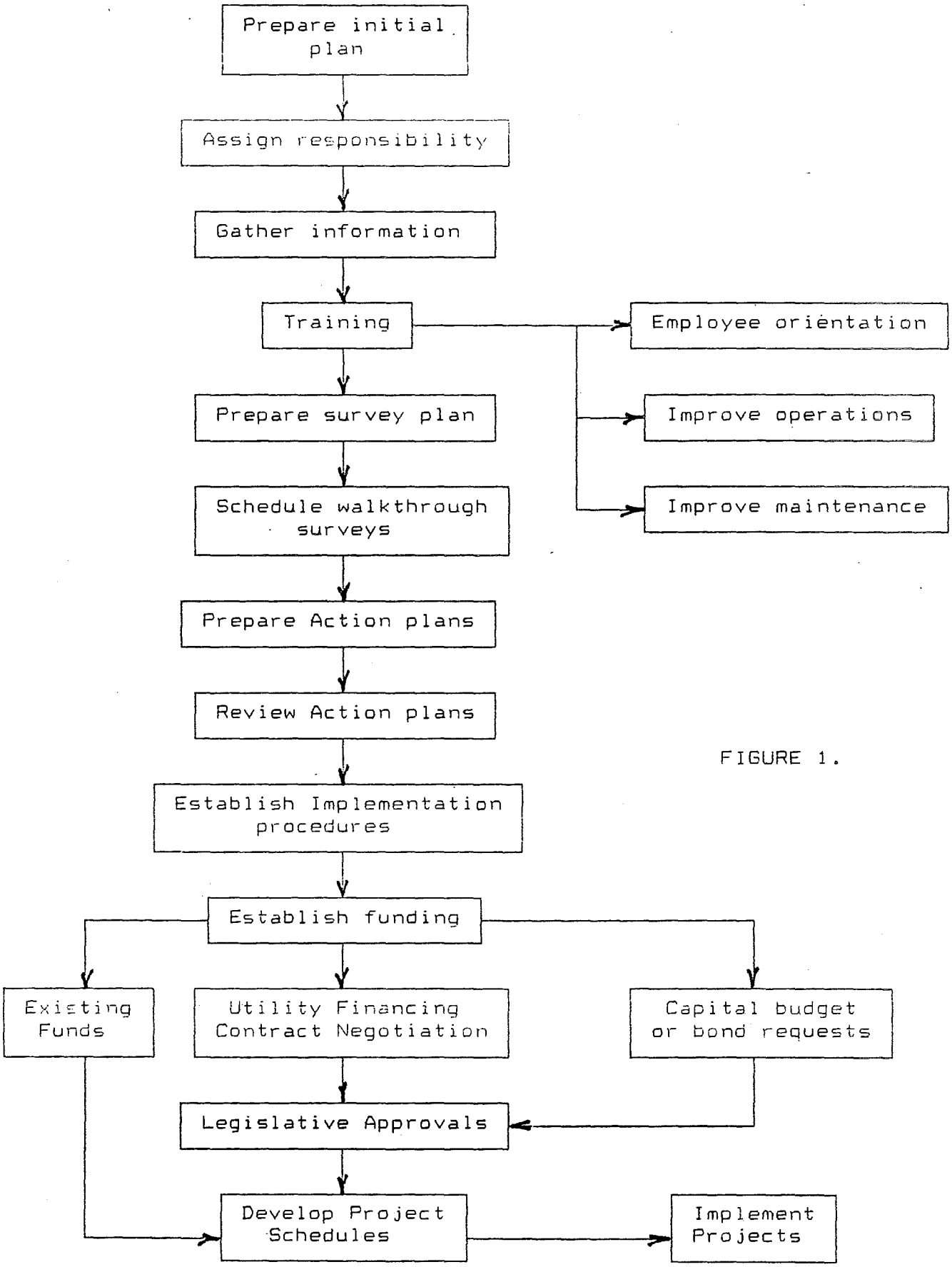

Prepare initial plan
Assign responsibility
Gather information
Training
Employee orientation
Prepare survey plan
Improve operations
Schedule walkthrough surveys
Improve maintenance
Prepare Action plans
Review Action plans
Establish Implementation procedures
Establish funding
Existing Funds
Utility Financing Contract Negotiation
Capital budget or bond requests
Legislative Approvals
Develop Project Schedules
Implement Projects

FIGURE 1.

ventilation systems, all are contributory factors and will be for the foreseeable future. Therefore, accurately establishing progress in meeting the objective will require agencies to report annually on:

1. increases in purchase of electrical energy consuming equipment, wattages, and anticipated usages

2. modification of building electrical systems or energy consuming HVAC equipment and impact on utility bills

3. increases in leased space acquisition or utilization

4. notification of new electrical accounts due to retrofitted or new buildings being brought on line.

The new energy uses outlined above can be evaluated and deducted from annual utility consumption summaries to determine progress in reaching the goal. Tracking and maintenance of these statistics on growth may prove valuable in modification of an ongoing conservation program or creation of new ones. The Division needs to further explore the alternatives in reporting formats or other means to account for growth.

D. ASSIGNMENT OF ROLES AND RESPONSIBILITIES

Included in the May 1980 recommendations of the Governor's Management Task Force on Energy Management in Maine State Government were two very important items which were never implemented.

1. "Establish energy conservation in State-owned buildings as an immediate priority for State officials."

2. "The position of Energy Management Coordinator be established in the Bureau of Accounts and Controls to be responsible for energy consumption data relating to State-owned buildings." This individual was to provide the necessary monitoring and reporting capability Statewide to insure compliance with established energy consumption standards as well as provide reports to be utilized by the Bureau of Public Improvements, Bureau of Purchases and the Bureau of the Budget in addition to other agencies.

Clearly, it was not intended that responsibility for energy conservation efforts was to be the sole province of B.P.I.'s Energy Management Division, nor should it be. Moreover, two staff positions within the Bureau cannot realistically execute the numerous tasks mandated by Title 5, Section 5014, in addition to the current activities. While additional staff would be welcomed and useful, there are other approaches which would be of equal value.

As part of the proposed program, energy management (electrical or otherwise) could be more concretely made a priority for <u>all</u> State Government by creating an infra-structure (see Figure 2) with duties and responsibilities towards energy management which extends to individuals throughout the various departments. This development would have many advantages:

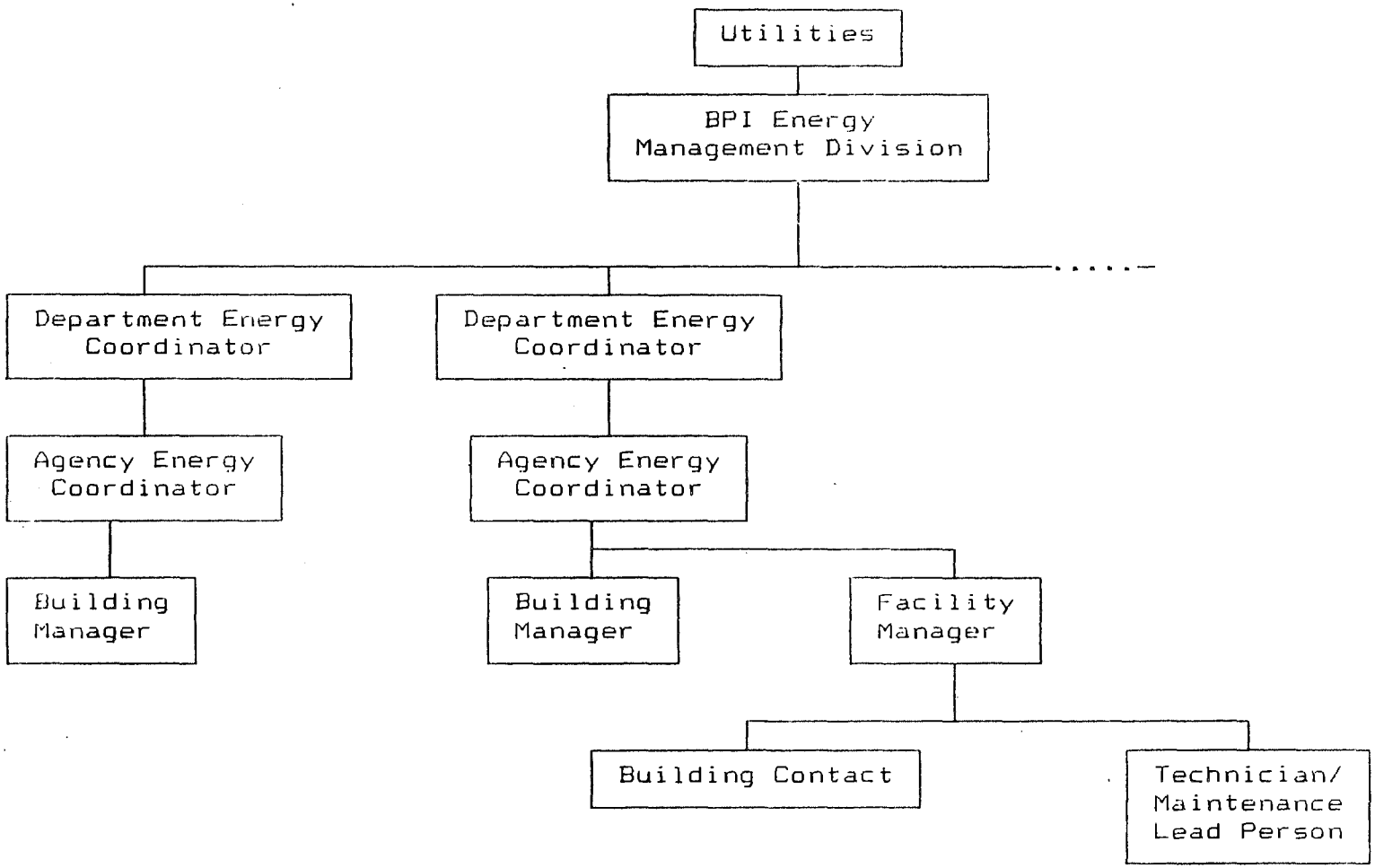

Utilities
BPI Energy Management Division
Department Energy Coordinator
Department Energy Coordinator
Agency Energy Coordinator
Agency Energy Coordinator
Building Manager
Building Manager
Facility Manager
Building Contact
Technician/ Maintenance Lead Person

Figure 2

1. breaking down the work into discrete tasks divided among many staff members would make projects more manageable and responsive without significant additional demands on any one individual's time;

2. increasing awareness and accountability for energy use at the department/institution/building level where it should exist;

3. aiding in the distribution of conservation information and training

4. firmly establishing a contact person at the site level with whom to coordinate audit scheduling and informational requests and to assist in project administration; and

5. providing an alternative conduit for energy project requests to be relayed to the Bureau in addition to the budgetary process now in place.

While the Bureau has necessarily developed an alternative method of tracking electrical consumption, no alternatives exist with respect to manpower, therefore, the following identifies particular agencies/divisions and the potential functions they would need to provide as part of this program. Mandatory recruitment of these services is believed to be authorized in the first sentence of Title 5, MRSA, Section 5014 which states, "The Bureau of Public Improvements shall conduct, with assistance from the Office of Energy Resources and any other State agencies as necessary, an ongoing program to conserve electrical energy used in State facilities".

BUREAU OF PUBLIC IMPROVEMENTS

Energy Management Division - B.P.I.

- Further develop and improve program(s)

- Contact all Departments to
  a. make them aware of the law and the objective
  b. initiate establishment of "top-down" structure of agency to building level "energy coordinators"
  c. outline assigned responsibilities of each level

- Maintain information on utility rate structures,

- Refine data and collection procedures,

- Establish base line electrical consumption records and maintain annual database,

- Coordinate and work with OER in the development of training programs,

- Define survey plan and parameters,

- Procure plan layouts of all buildings for auditor use,

- Schedule audits by utilities,

- Standardize acceptable energy measures and equipment to expedite evaluations,

- Develop spread sheets and other programming "macros" to expedite analysis of project costs and energy saving potentials,

- Establish conservation project implementation procedures and schedules,

- Prioritize audits and conservation projects implementation,

- Procure engineering services for feasibility/analysis/design on major projects,

- Develop standardized specifications for materials and work on small projects,

- Coordinate competitive purchases for material only projects (to be implemented by in-house labor),

- Evaluate financing options,

- Serve as central contact for rebate and alternative financing contract negotiations,

- Prepare and make necessary fund requests to the Legislature,

- Make an annual report to department commissioners on their progress in energy conservation projects and electrical energy reductions or lack of same,

- Provide annual report to legislature on program progress.

Space Management - B.P.I.

- Revise, in conjunction with EMD, standard lease agreement with respect to lighting and electrical equipment standards. Lease renewals shall be predicated upon modifications being made to improve efficiency with respect to revised lease standards,

- Provide annual report on new leases identifying the utility and utility account numbers. Provide notification when leases are renewed to permit examination of subsequent utility records to establish compliance with lease revisions,

- Verify existence and document separate meter for electrical circuits for which the State assumes the cost in use in leased space.

Division of Safety and Environmental Services - B.P.I.

- Provide EMD with recommendations on advisability of reduction in fan horsepower in ventilation systems as may be proposed by energy auditors,

- Provide notification of where increases in ventilation equipment are necessitated by indoor air quality concerns and of energy use consequences.

Property Records - B.P.I.

- Provide annual report on "retired" electrical consuming equipment and associated wattages.

BUREAU OF PURCHASES

- Maintain records of electrical consuming items and associated wattages purchased by State agencies and report annually in a format to be provided by B.P.I.,

- Direct requisitions or purchase orders for inefficient lamps and motors to our attention and subject to our review and approval,

- Revise, in conjunction with EMD, statewide contract bid specifications for electrical equipment or products,

- Abandon advisory status on energy efficient lamp purchases making them mandatory,

- Abandon practice of processing orders for higher voltage, "extended-life" lamps as these consume greater amounts of energy while producing less light output than standard voltage lamps.

BUREAU OF ACCOUNTS AND CONTROL

- Provide EMD with annual costs coded to electricity,

- Provide assistance in establishing and maintaining accurate list of utility account numbers.

DEPARTMENT OF EDUCATION/DIVISION OF SCHOOL FACILITIES

- Re-institute reporting and maintenance of public school energy consumption database discontinued in 1983. Data to be provided to public utilities, OER, BPI, and ICP auditors upon request.

OFFICE OF ENERGY RESOURCES

- Assist BPI/EMD in development and execution of training programs of appointed agency energy coordinators, building managers, and maintenance personnel,

- Assist BPI/EMD in preparation and distribution of energy conservation guidelines and practices for operations and maintenance plans,

- Assist BPI/EMD in preparation and distribution of energy conservation literature/newsletters relating to energy goals, programs and achievements,

- Provide literature searches and other useful information from other State Energy Offices on products and programs which may be of benefit,

- Assist BPI/EMD in developing incentives programs and in getting legislation initiated and passed to adopt them as may be necessary.

ALL DEPARTMENTS

- Appoint and identify hierarchical structure of "energy coordinators" from departmental to building level,

- Revise task statements of positions appointed as ongoing "energy coordinators",

- Assist in distribution of conservation program literature and requests (as may be appropriate) to all lower tier "energy coordinators",

- Initiate employee awareness programs as developed by BPI and OER,

- Prepare maintenance plans to be submitted to BPI/EMD for review and approval or amendment,

- Prepare operational plans to be submitted to BPI/EMD for review and approval or amendment,

- Assist BPI/EMD, in a timely manner, with the scheduling and execution

of audits,

- Implement, if so directed by BPI/EMD, small energy conservation projects with in-house staff,

- Implement, if so directed by BPI/EMD, solicitation of competitive quotes from local area contractors for moderate sized energy conservation projects. Additionally provide project administration during the course of the contract,

- Provide BPI/EMD notification of energy conservation project completions,

- Be responsible for maintaining energy conservation measures and equipment installed. Revise budgeted replacement costs to provide similar efficient products at end of useful life,

- Notify BPI/EMD, in a format to be provided, when new electrical utility agreements are entered into,

- Notify BPI/EMD, in a format to be provided, of changes in use or equipment in buildings which affects or may be assumed to affect electrical energy consumption,

- Designate responsibility of reporting annual KWH figures from sub-metered buildings.

LEGISLATURE

- Support appropriations for energy conservation funds or bond issues as may be requested and deemed necessary,

- Provide incentive by approving requests permitting rebate monies returned to the General Fund be used for further conservation project funding.

E. INFORMATION GATHERING

The Energy Management Division has established contact with all the electrical utilities in Maine. In order to accurately determine the current (and future) electrical energy consumption of State-owned or leased facilities, BPI has instituted measures which will allow our office to receive data down-loaded from the utilities main frame computers to our micro-computer. The exception to this is the Maine Public Service Company which provides paper printouts that EMD will have to manually key into our database. BPI currently has an accurate picture of KW demand and KWH consumption by month for all buildings which lie within Central Maine Power Company territory.

Presently, the Bureau of Accounts and Control is segregating account numbers from other electrical utility bills to permit acquisition of similar data from the other utilities.

Additionally, the EMD has procured computer listings from the vendor holding the Statewide purchases contract for lamps and is analyzing this data

further to evaluate current buying practices of State departments with respect to energy efficient products. The Energy Management Division, in the process of reviewing this information, put together a substantial rebate request for last years purchases of energy efficient lamps which CMP has recently approved. Review of this data will be conducted on an ongoing basis to insure that State buying practices retain an energy efficiency component.

In order to arrive at goals and provide the Legislature with information on categories of electrical energy use, the Energy Management Division has compiled data from the original building energy audits. Refer to Section II and Appendix, for more information.

Lastly, efforts have been made to maintain current knowledge of what is commercially available, proven, and economically viable in the electrical energy conservation market through staff attendance at seminars, meetings with vendors, and compilation of product literature.

F. TRAINING

It is estimated that up to 3% reduction in electrical energy conservation could be achieved simply by assisting and motivating State employees to adopt energy conscious work habits. In round terms, this would represent an average annual savings of 1,448,000 KWH/year for an approximate dollar savings of $114,000 per year Statewide. While the Energy Management Division cannot "police" the entire State, this low cost approach should be attempted through initiatives developed with the assistance of OER and the system of energy coordinators proposed.

Among the approaches might be:

1. Raise typical employee consciousness by periodic distribution of printed reminders to turn off overhead lights when leaving unoccupied rooms, turning off desk task lights, fans, computers, typewriters, etc when not absolutely necessary. Promote the utilization of task lighting versus overhead lighting.

2. Working through agency levels and mailing lists from the Bureau of Human Resources of supervisory personnel, remind supervisors quarterly that they should be reinforcing the efficient use of State resources and should monitor and counsel employees in that regard.

3. Require that agency management develop and establish (based on guidelines and recommendations developed by OER and EMD) policies with regard to operation of the Building and equipment they use. As Examples:

    a. Someone should be designated to flip breakers or otherwise turn off lights in the building at the close of business hours.

    b. After hours custodial work should be scheduled on a floor-by-floor basis so lights throughout the entire building are not left on until that function is completed.

c. Building security should be handled by making a Capital Budget request for an alarm or other security system rather than leaving interior lights on during the night.

4. Require that agency management prepare and approve proper maintenance practices of electrical systems (based on guidelines and recommendations developed by OER and EMD). Typically lighting systems are over-designed with respect to illumination levels in order to compensate for anticipated maintenance neglect and lamp lumen depreciation. With proper maintenance and planned group re-lamping fixture wattages can be reduced without degrading footcandles. Similarly, faulty ballasts (excessive hum), if left uncorrected, will operate less efficiently.

5. Develop positive incentives in addition to negative ones for energy conservation. An example of a negative incentive would be to require agency management to justify increases or failure to decrease energy consumption in buildings under their management. Alternatively, not requiring <u>any</u> reports of agency heads where consumption figures are favorable is a positive inducement to take the program seriously. Washington State developed an incentive program whereby employees were able to gain a small share from the savings attributable to their positive actions in conserving energy. This avenue and others merit further exploration.

Other training would aim directly at the various levels of "energy coordinators" established within the different departments. It would orient them to the program proposed and their individual responsibilities, as well as gain insights, from their perspective, on how to better structure or manage the program.

G. SURVEY PLAN PREPARATION

This activity would be developed in further detail concurrently with the training program which the Energy Management Division hopes can be predominantly administered by the Office of Energy Resources. It would consist of a two phase process the first of which would be implemented by the utilities' auditors and the second on an ongoing basis by the "energy coordinator" hierarchy to be developed.

Since estimates indicate that the largest percentage (approximately 67%) of energy consumption in State facilities is due to lighting loads, this area will be the focus of attention in the first phase of auditing. All electrical utilities have programs and staff to perform this function, although not without limitation, and have indicated agreement to doing the audits without charge. Bangor Hydro-Electric does require a nominal retainer fee which is refundable if the recommendations are executed in a timely fashion.

The Bureau proposes to structure and standardize the survey format to protect the State's interests with regard to maintaining adequate lighting levels for employees and improve our ability to process and evaluate the content quickly. The Energy Management Division will provide CAD floor plans

of all buildings and survey forms which will link data to spaces sufficient to permit:

a. evaluation of lighting levels with standards for space use and the impact of auditor recommendations on them,

b. location of recommended conservation measures to be implemented subsequent to evaluations.

The survey procedure will consist principally of fixture counts and locations, identification of current light source (fluorescent, incandescent, HID, etc.) , electrical components (ballast types, switching arrangements, etc.), wattages and estimated hours of use. The auditor will then provide a recommendation for a direct replacement type having the most efficacious result with respect to lumen per watt. Where fixture types would preclude conversion or are in such disrepair or of such age that expenditure for retrofit would be imprudent the auditor will be permitted to make a subjective determination for new fixtures fully employing high efficiency technology.

H. SURVEY SCHEDULING

Buildings and complexes will be audited by priority based on the ranking of annual consumption and kilowatt capacity per square foot of building area in a descending order because the greatest potential for significant savings is possible in facilities with these characteristics. A building's audit order shall be ranked only against others within the same utility territories.

The order for facility surveys within the CMP district is currently prioritized since utility records are in hand. The Energy Management Division has requested the Bureau of Accounts and Control to provide account numbers for the other utilities. Upon receipt, consumption records will be obtainable and the order of these audits prioritized.

Upon completion of the ranking process and the designation of agency coordinators for the first targeted buildings, arrangements will be made between the building contact and the utility services administrator to initiate the audit.

This process shall be continued until such time as all State building surveys have been completed for Phase I of the program. Phase II of the program shall be scheduled on an ad hoc basis subject to further analysis of building/facility load profiles (additional information return requested of agency coordinators and subsequent prioritization).

As a result of meetings with the utilities representatives the BPI/EMD can comment on the resource capacity of the utilities auditors as follows:

MAINE PUBLIC SERVICE

Maine Public Service has only one commercial auditor for their entire territory. This resource being limited will result in substantial delay in completion of all audits in that area. BPI/EMD

would recommend that an appropriation of funds be made in order to contract the larger facility audits and employ MPS for the balance of smaller but more numerous commercial facilities.

BANGOR HYDRO-ELECTRIC COMPANY

Bangor Hydro-Electric has two commercial auditors. The company has verbally agreed to schedule a specified number of man days per month to be devoted to State audits.

CENTRAL MAINE POWER COMPANY

As most State owned facilities lie in this utilities service districts, CMP in their commitment to this effort have engaged a consultant firm to interface directly with the BPI/EMD and conduct the audits. The extent of manpower resources is unknown but, a limit of 50 buildings per year has been stipulated. Since records show 520 active accounts with this company (and given that approx. 50% of these are estimated to be leased space, one building per account) it will take over five years to complete all audits. Again, either the engagement of consultant firms to perform audits (and the allocation of funds to do so) or other remedies will have to be explored to improve the rate of progress to completion for this phase. It is for this reason also that the EMD has first attempted to numerically rate the buildings for audit priority - in order to maximize the potential results of a limited number of audits.

Audits have been tentatively scheduled to begin February 1, 1989 for the first fifty buildings which shall concentrate in the Capitol Complex, Augusta Mental Health Institute and the Maine State Prison.

I. ACTION PLANS

Action plans will simply be the recommendations provided by the utility auditors. This structure of the survey format will, subject to review and approval of the recommendations, permit proceeding to the execution phase in accordance with the appropriate implementation procedure as defined in Section II, Part K, of this report.

J. REVIEW

The review procedures, to be performed by the EMD, will consist of three components:

1. feasibility
   a. in accordance with illumination standards
   b. technical

2. economic viability

3. categorization for implementation

Note that current Department of Administration policy is to only endorse or approve the expenditure of funds which would result in at least the minimum recommended lighting levels as given in ANSI/IES A132.1-1973 or RP-1-1982 standards.

Technical review of the measures recommended should, in most cases, be cursory as the Energy Management Division expects to develop a list of acceptable measures and circumstances for the suitability of their application. However, this will not be intended to totally circumscribe the purpose of the survey or restrict the auditors judgement/suggestions.

An evaluation of economic viability would be based upon estimated costs provided by the audit service, as applicable, and computerized programs using appropriate utility rate structure and current demand/complex developed and maintained by the Energy Management Division for such purposes.

Subject to passing review on the items above, the measures recommended would be categorized and processed in accordance with the proper procedure as given in the following section. If additional information or clarification is required, the agency coordinators will be requested to provide such information in a timely manner.

K. IMPLEMENTATION PROCEDURES

In all circumstances, implementation would be conducted in accordance with State of Maine Purchasing and Contracting Procedures as given in the Department of Administration Manual of Financial Procedures and other State laws as applicable.

Implementation shall be categorized based upon total estimated cost of the measure recommended:

1. No cost recommendations

- Forwarded by BPI/EMD to appropriate agency coordinator for immediate action.

- Notification of compliance with requested action to be provided to BPI/EMD upon execution.

2. Recommendations under $1,000

- Forwarded by BPI/EMD to appropriate agency coordinator for action with agency funds and in-house staff. BPI/EMD to provide materials specifications and purchasing coordination.

- Where multiple recommendation would result in an aggregate total cost well in excess of $1,000, agency may request materials funding assistance from BPI/EMD.

- Agency coordinators would be responsible to develop work implementation schedule utilizing in-house staff.

- Notification of compliance with requested action to be provided.

- BPI/EMD to initiate utility rebate requests as appropriate.

3. Recommendation between $1,000 and $10,000

- BPI/EMD to provide standardized scope of work and materials specifications to appropriate agency coordinators.
- BPI/EMD to provide funding source.
- Agency coordinators responsible for solicitation of quotes from local area contractors.
- Agency coordinators to provide contract/project administration.
- Notification of project completion to be provided to BPI/EMD by agency coordinator.
- BPI/EMD to initiate utility rebate requests as appropriate.

4. Recommendations between $10,000 and $25,000

- BPI/EMD to provide standardized bidding documents or list of engineering consultants to develop same to appropriate agency coordinators.
- BPI/EMD to provide funding source for consultant services and project.
- Agency coordinators to be responsible for bid and contract date scheduling.
- Agency coordinators to provide contract/project administration.
- Notification of project to be provided to BPI/EMD by agency coordinators in a timely fashion.
- BPI/EMD to initiate utility rebate requests as appropriate.

5. Recommendation estimated to be over $25,000

- BPI/EMD to prepare total budget, evaluation priority of funding and establish funding source.
- BPI/EMD to engage engineering consultant for development of bid documents in accordance with State of Maine A/E Procurement Manual.
- BPI/EMD to develop and track project schedules.
- BPI/EMD to initiate utility rebate requests as appropriate.

L. FUNDING

1. Current Resources

A. BPI Energy Management Division

Energy Conservation Bond Issue Funds - none.

Stripper Well Fund Allocation - approx. $75,000 in project funds were identified in the original audit information used in justification to the legislature for the re-allocation received in 1988.

Capital Budget Line Item Request for Energy Conservation - $1,000,000 in funds were requested for the upcoming biennium.

B. Utility Alternative Financing Programs

Maine Public Service

No financing programs available. This company only has a lighting/motor rebate program.

Bangor Hydro-Electric Company

This company can provide funds through subsidy of a low interest loan (3 percent) for qualified projects. However, the project must pay back in under 5 years or within the useful life of the measure, whichever is lowest.

A lighting and motor rebate may be extended for the State.

Central Maine Power Company

This company provides both a lighting/motor rebate program and several alternative financing mechanisms, i.e

Power Partners requirements - minimum KWH savings of 100,000/yr
minimum useful life of 5 years
projects proposals compete
application deadlines
limited offering times

Efficiency Buy-Back program - finances 50% of project cost or less
minimum KWH savings of 500,000/yr
minimum useful life of 10 years
application deadlines
limited offering times

Shared Savings - minimum KWH savings of 500,000/yr
minimum useful life of 5 years
payback less than 5 years
CMP pays 100% up front
ongoing program
interest charge of 15% on capital cost

2. Discussion

Table 1 summarizes the potential KWH savings and dollar savings which could accrue as part of an aggressive phased program of energy conservation implementation based upon unit cost projections from the Office of Energy Resources 1987 econometric forecasts for electricity prices. Whether this may be realizable is dependent upon utility auditors capability for timely identification of recommendations and our/their ability to fund them.

Given an equivalent uniform annual sum for the expected dollar savings being $550,000 and typical simple paybacks being on the order of 5 years would suggest $2,675,000 in project capital as being an appropriate estimate. An additional $575,000 would be recommended for A/E design fees for larger projects and consultant serves to quicken the pace of audit surveys bringing the total projected cost for improvements to an even three million dollars.

State Funded

A bond issue in the amount of 3,000,000 would expedite implementation of projects in that sources funded would not need to be arrived at on a case by case basis. Rebates may be estimated at approximately 20% of initial capital cost, in the aggregate, producing an expected total of $520,000 and further reducing the net cost to the State while shortening payback periods.

Maine Public Service

Lack of capital on our part is a severe handicap in the Maine Public Service territory.

Bangor Hydro-Electric Company

The ability to make use of the low interest loan program would most certainly be advantageous to the State. Legislative clarity on the term "without limitation" needs to be secured however.

Subsidized loans aside, to take advantage of rebate programs would require initial capital supplied by BPI/EMD.

Central Maine Power

While this company has the most diverse array of program availability, they are not without limitations or penalties. Power Partners and Efficiency Buy Back Programs are limited in the number of periods of offering and could jeopardize or delay implementation of recommendations. The Power Partners Program would force the Bureau to aggregate recommendations to meet the requirements and force us into competitive bidding for the price of power against other proposals. After potentially protracted evaluation periods and contract negotiations, the State would still not be ultimately assured of entering into agreement on financing to achieve implementation. The Efficiency Buy Back Program has good potential for longer payback projects but still requires at a

BASE YEAR CONSUMPTION AND COSTS

	KWH	COST	$/KWH
1988-89	55,428,715	$4,600,583.35	$0.083

program year	consuaption w/no conservation	consuaption w/ programmed reduction	annual kwh savings	unit cost $/kwh
1989-90	55,428,715	55,428,715	0	$0.090
1990-91	55,428,715	53,765,854	1,662,861	$0.097
1991-92	55,428,715	51,271,561	4,157,154	$0.102
1992-93	55,428,715	49,165,270	6,263,445	$0.105
1993-94	55,428,715	47,114,408	8,314,307	$0.108
5 year totals	277,143,575	256,745,808	20,397,767	

	annual cost w/no conservation	annual cost w/programmed reduction	annual dollar savings
1989-90	$4,988,584.35	$4,988,584.35	$0.00
1990-91	$5,376,585.36	$5,215,287.79	$161,297.56
1991-92	$5,653,728.93	$5,229,699.26	$424,029.67
1992-93	$5,820,015.08	$5,162,353.37	$657,661.70
1993-94	$5,996,301.22	$5,098,356.04	$897,945.18
5 year totals	$27,835,214.93	$25,694,280.81	$2,140,934.12

Table 1.

minimum 50% of the up front costs for project implementation. The Shared savings program is a last resort. A fifteen percent interest charge is made on the capital costs in addition to savings being split to pay back project costs. The State would be making a more advantageous move by issuing bonds at 6-7% in lieu of this option.

M. PROJECT INITIATION SCHEDULING AND COMPLETION

Implementation categorization, and availability of funding will dictate project initiation. If it is optimistically assumed, the utilities will be able to complete all surveys and audit recommendations by the close of 1989, four years will remain to initiate and complete. With adequate agency cooperation, this should be a realizable objective.

No cost and low cost projects should be initiated on an immediate priority basis. Multiple small projects will be the responsibility of the agency coordinators to schedule and complete. Annual reporting requirements to departmental commissioners on status of projects requested by BPI/PMD should enable timely correction of poor performance.

Large projects should be managed by the Energy Management Division, with as much assistance and cooperation as required of the agency coordinators.

As previously noted, lack of availability of funding, lengthy contract negotiation procedures, or other difficulties could seriously jeopardize the ability to aggressively schedule and complete the electrical energy conservation work once identified.

II. INVENTORY OF ELECTRICAL ENERGY USE IN STATE GOVERNMENT

Based upon actual dollars costs coded to the character and object code 4521, Electricity accounts, the electrical energy consumption history and costs for the State, as a whole, were developed and given in Figures 3 and 4 on the next page. In order to "back-substitute" the kilowatt hour usage amount the average KWH cost as given by the Office of Energy Resources Comprehensive Plan data was used.

In conjunction with this, the original 555 energy audits for the State owned buildings were compiled with respect to electrical watts per square foot for the following categories:

1. Interior lighting
2. Exterior lighting
3. Equipment (office, work related machinery, etc.)
4. Fan horsepowers
6. Pump horsepowers
7. Electric heating

These wattages represent normalized values for diversity of use. Similarly, average "on" times for space type and usage were applied to produce the multiplication factor giving kilowatt-hour consumption. Little information being available for the approx. 1,300,000 square feet of leased space, an average of 2.75 watts per square foot was assumed (based upon engineering judgement) as well as general office hours of 2610 hours/years.

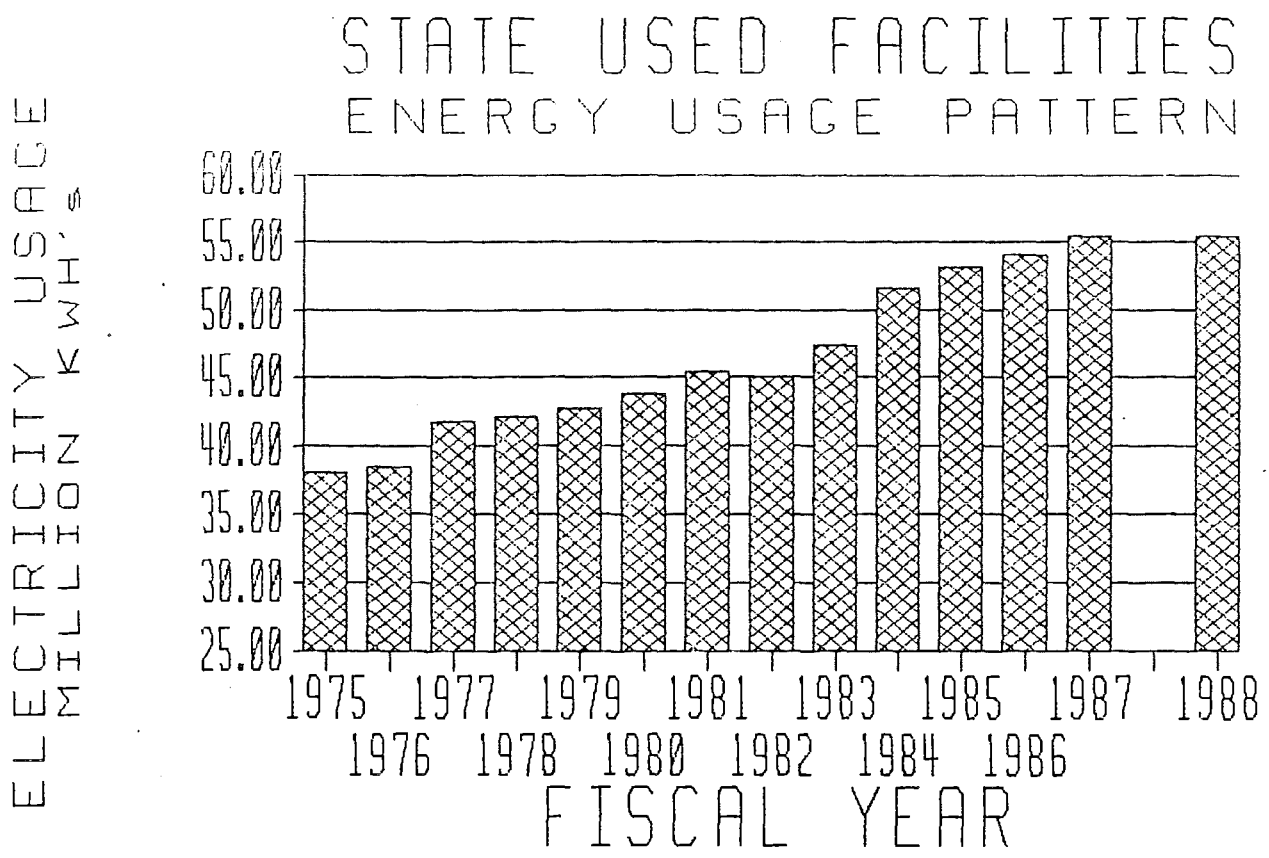


Figure 4.

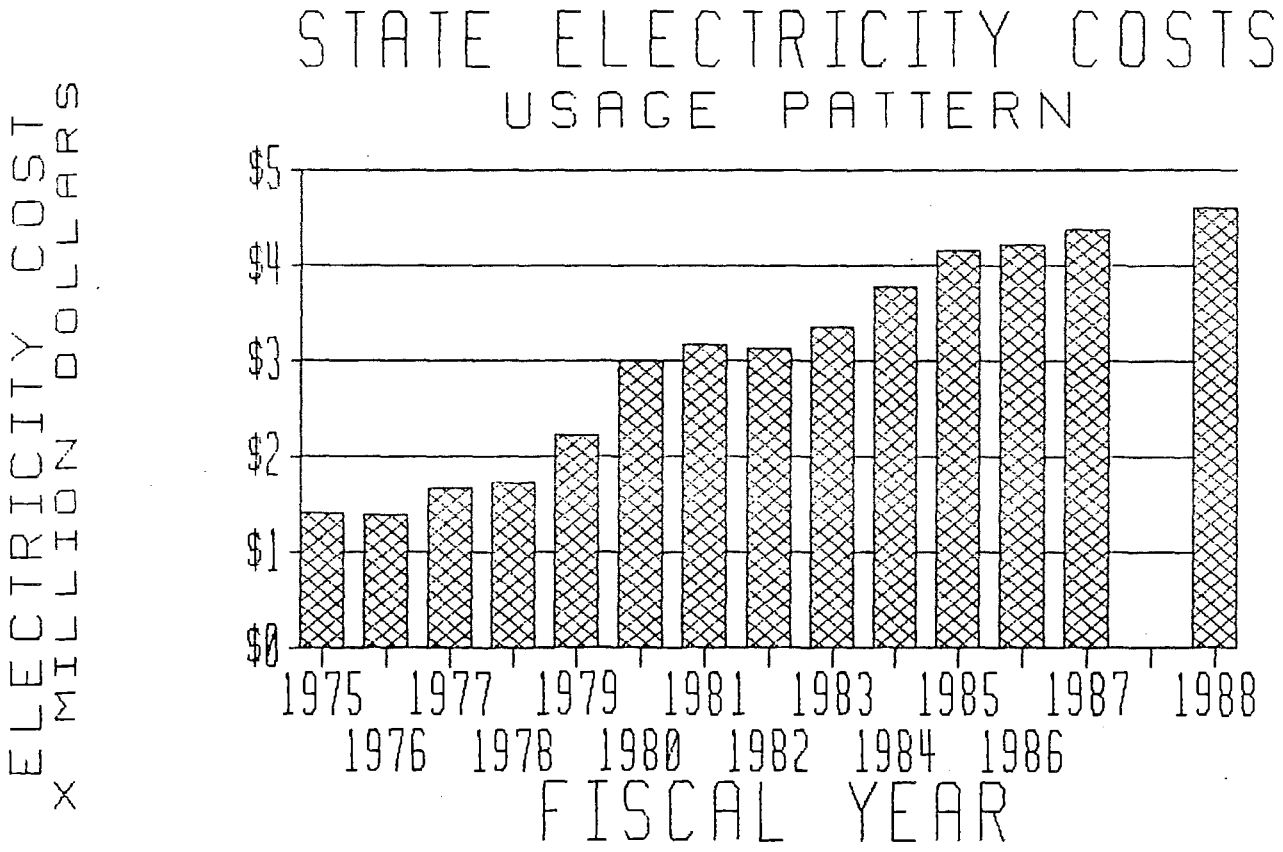


Figure 3.

The following pie-charts, Figures 5 and 6 illustrate the results of this process. An attempt to reconcile the various approaches in order to gauge accuracy gave the following result.

From cost data	
Total	**55.4 million KWH/yr**
From existing audit data	38.9 million KWH/yr
Estimated 10% increase for new construction, equip. since original audits	3.9 million KWH/yr
Estimate leased space	9.3 million KWH/yr
Total	**52.1 million KWH/yr**
CMP figures	48.0 million KWH/yr
Estimated MPS,Bangor Hydro (based on % square feet)	4.8 million KWH/yr
Total	**52.8 million KWH/yr**

Based upon these evaluations the BPI/EMD may state that electrical energy use is on the order of 53.4 million kilowatt-hours per year plus or minus 1.7 million. This base-line figure for consumption is currently only an estimate and all inaccuracies in future will be eliminated subsequent to our completing compilation of account numbers so that the remaining utilities (Maine Public Service, Bangor Hydro) can "down-load" this information to us from their computers and provided agencies keep the EMD apprised of new accounts.

Detailed listings of the demand and KWH consumptions by building may be found in the appendix.

III. OPPORTUNITIES FOR EFFICIENCY IMPROVEMENT AND CONSERVATION

There is no question that opportunities exist for improvement in State facilities, electrical energy efficiency or otherwise. In order to assess the extent to which opportunity exists in the absence of audits available, the approach has been to undertake a statistical analysis similar to that prepared for the Rhode Island Least Cost Planning Committee by Xenergy Inc..

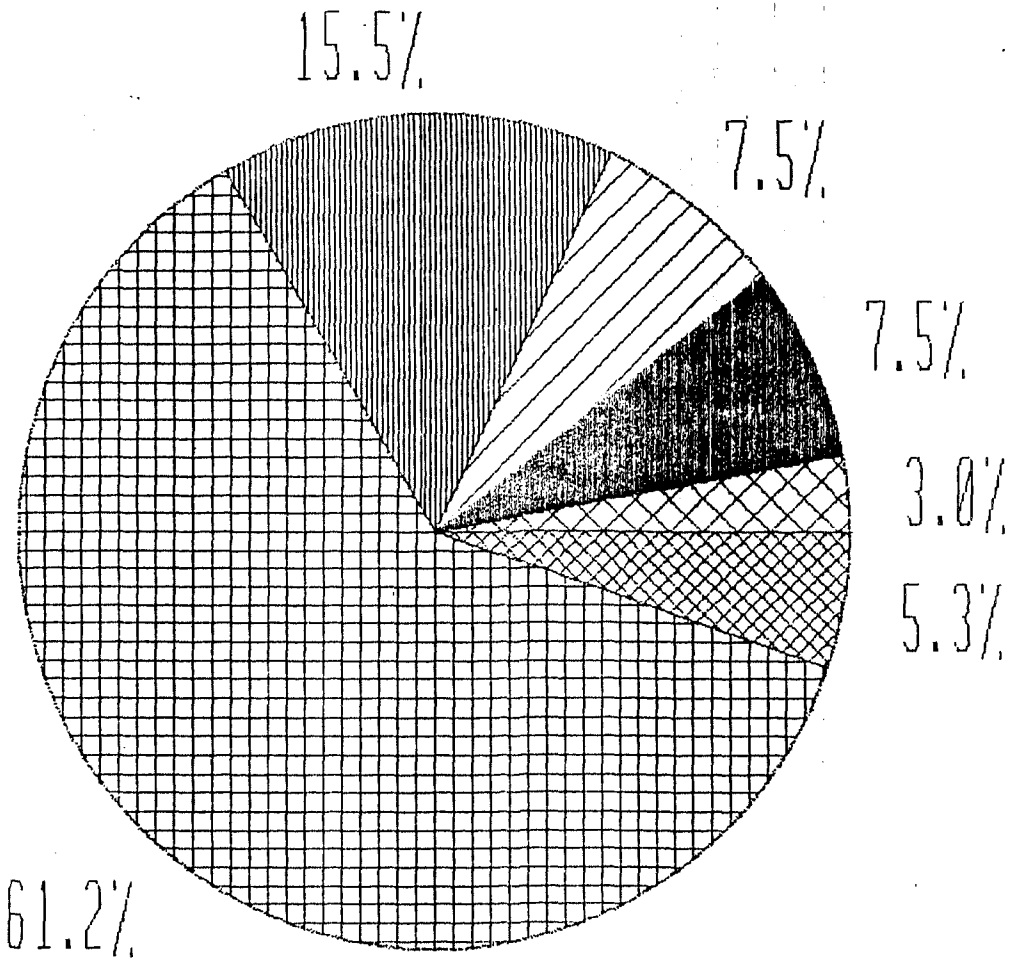
Beginning with a baseline for energy consumption, the categories and percentages of end use are established and reasonable estimates of reduction potential based on audits, experience and technologies available are ascribed to the categories. Table 2. summarizes the results of this analysis and is the basis for the goal of 15% reduction.

Lighting electrical use not only represents the category of greatest end use (66%) but also the largest potential for reduction through high efficiency lighting technology. The first phase of the program will therefore set as objectives:

1. Reduction of incandescent lamp types to minimum possible through use of HID lamp sources and/or compact fluorescence
2. Retrofit of existing fluorescence with energy efficient or electronic ballasts

KW DEMAND BREAKDOWN

FIGURE 5



KWH USAGE CATEGORIES

FIGURE 6

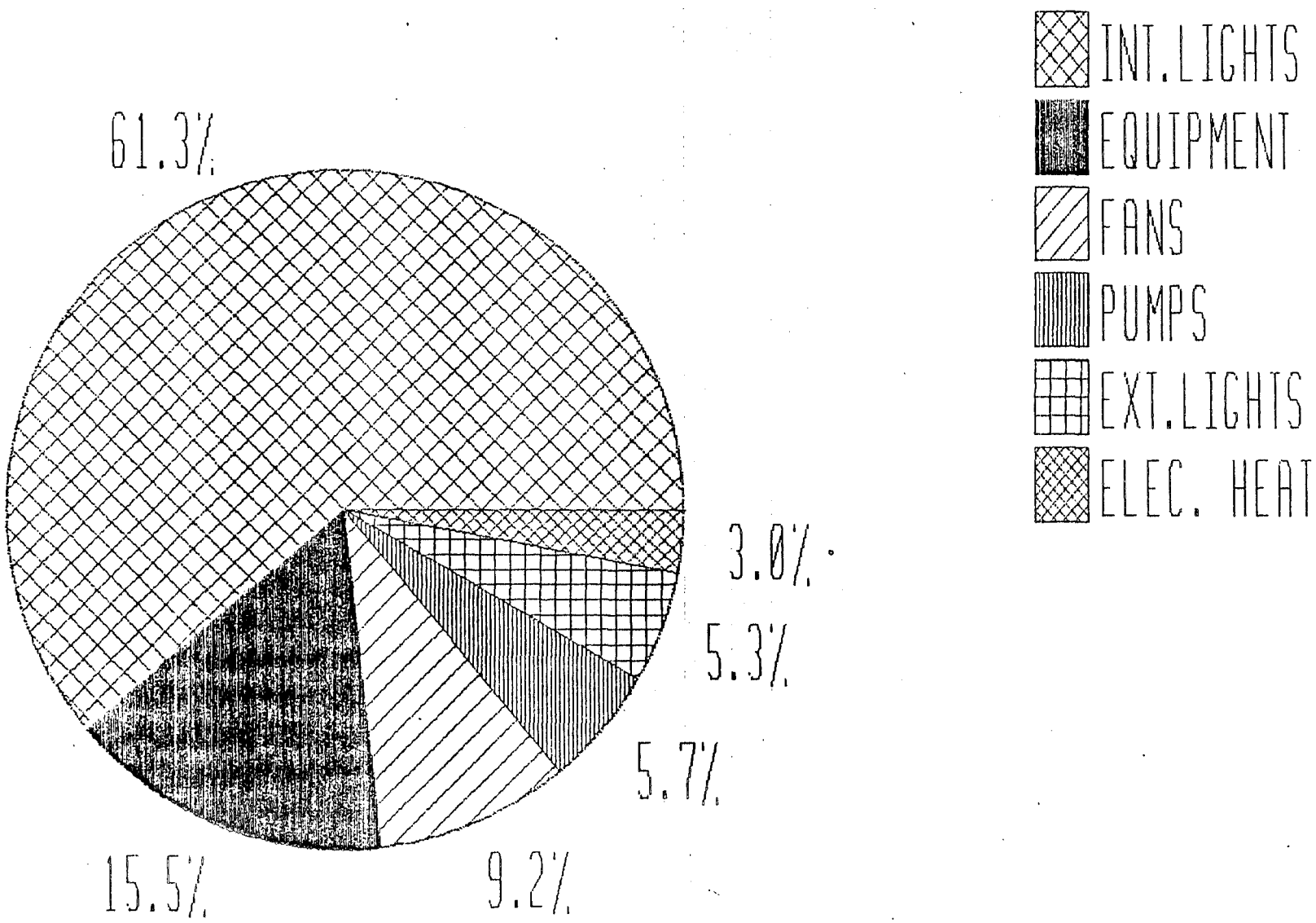


Table 2.

STATE OF MAINE ELECTRICAL ENERGY CONSERVATION OPPORTUNITIES

Analysis parameters

Average statewide unit cost of electricity =	$0.079	per KWH
Actual costs coded to electricity in FY88 =	$4,378,868.47	
Statewide electrical energy consumption =	55,428,715	kwh

usage type	percentage of total	breakdown kwh	annual cost	kw	reduction possible demand	reduction possible usage	kwh saved	dollar savings
mechanical systems	14.9%	8,258,879	$652,451	2,021	0.0%	1.0%	82,589	$6,525
office equipment	15.5%	8,591,451	$678,725	3,130	0.0%	3.0%	257,744	$20,362
lighting	66.6%	36,915,524	$2,916,326	11,150	15.6%	3.0%	6,866,287	$542,437
heating	3.0%	1,662,861	$131,366	1,560	50.0%	0.0%	831,431	
	100.0%	55,428,715	$4,378,868	17,861	-	14.5%	8,038,051	$635,006
exterior	8.00%	2,953,242	$233,306			38.8%	797,375	$62,993
incandescent	30.00%	885,973	$69,992		50.0%		442,986	$34,995.52
mercury vapor	40.00%	1,181,297	$93,322		30.0%		354,389	$27,996.73
HID	30.00%	885,973	$69,992		0.0%		0	$0.00
interior	92.00%	33,962,282	$2,683,020			28.9%	4,983,765	$393,739
incandescent	7.50%	2,547,171	$201,227		60.0%		1,528,303	$120,736
fluorescent	92.50%	31,415,111	$2,481,794		11.0%		3,455,662	$272,997

fluorescents

% existing	type	existing watts	new	reduction %	overall reduction
25%	"40w/standard ballast"	181	134	-26.0%	-6.5%
65%	"34w/standard ballast"	144	134	-6.9%	-4.5%
10%	"34w/energy eff. ballast"	134	134	0.0%	0.0%
100%					-11.0%

3. Control of all exterior lighting by photocell or time clock control
4. Proper management/control by State employees

The second phase of a long term program would examine:

5. Peak shaving by agency control/use at utilities request (interruptible rates)
6. Demand limiting/energy management systems installation (automatic load shedding)
7. On site generation through use of idle emergency generators
8. Micro-cogeneration (for on-site use, not sale) to simultaneously satisfy domestic hot water needs while reducing utility loads (load levelling)

IV. ANNUAL REPORT TO THE LEGISLATURE

Future annual reports to the Legislature will summarize:

1. changes or improvements in the program,

2. identification of problem areas which the Legislature may be of assistance in resolving,

3. more accurate accounting of electrical consumption data and categories of use as initially requested,

4. projects initiated, in progress, and completed,

5. electrical use reduction totals to date,

6. agency "report cards", and

7. current funding levels, expenditures and avoided costs to date.

V. SUMMARY

In reducing electrical energy consumption in the 6.9 million square feet of State owned buildings by fifteen percent, the Energy Management Division faces a considerable challenge and is optimistically hopeful about achieving that goal.

This report proposes a program structure which when implemented with the full cooperation of all state administrators and employees may permit our limited staff to accomplish the outlined objectives. The Division has attempted to define the nature of responsibility and activities of ourselves and other state and utility participants. In turn it is respectfully requested that clear Legislative policy direction around which the Bureau can budget, staff and implement the projects be provided.

Our program involves more active participation of the individual state agencies in regard to energy management than has previously been the case. The intent of Title 5, section 5014 with respect to "with assistance from OER

and other state agencies" needs to be clarified or reinforced to grant adequate authority to require this assistance.

The report, in developing an "inventory" of electrical energy use, suggests that the State power demand is around 18 Megawatts and we are currently using approximately 54,000,000 kilowatt-hours/year of electricity. The goal of 15 percent reduction, when phased over time, could result in 20 million KWH being avoided for a potential dollar savings of $2,000,000 over the initial five year program period. Total avoided costs would be much higher beyond that period to the end of useful life of the measures implemented when properly maintained.

While the language of the statute requires the Bureau to develop an aggressive schedule to take advantage of all utility programs such as rebates and cost-sharing "without limitation", the report identifies the impediments to taking optimal advantage of them. Principal among these is the need for initial sufficient capital to implement the measures to qualify for rebates or match utility grants. The necessity and worthiness of the goal of reducing electrical demand in the State warrants the commitment of resources not only from a fiscally advantageous standpoint but that of providing a leadership role in the realm of energy conservation.

Footnote: Data used to formulate this report is on file with the Bureau of Public Improvements and is available upon request.

A P P E N D I X

Bureau of Public Improvements Electrical Energy Use Audit Compilation

Department: Administration

Agency: Capitol Complex

Building	Kilowatts	Kilowatt-hours/year
SASP BLDG	7	26594
CENTRAL WAREHOUSE	14	52754
STAFF HOUSE	2	9538
SUMNER HOUSE	3	11043
DASCHLAGER HOUSE	3	11063
MERRILL HOUSE	3	13150
BLAINE HOUSE	4	17331
187 STATE ST	5	17634
MCLEAN HOUSE	5	21434
MTA BLDG	6	23580
FLYNN HOUSE	6	24601
DISTRICT COURT	23	92273
SERVICE GARAGE	25	93959
MOTOR VEHICLE/PUC BLDG	27	106913
Capitol Parking Garage	36	157680
EDUCATION BLDG	44	178738
LIQUOR WAREHOUSE	59	225041
STATE CAPITOL BLDG	189	739060
STATE CULTURAL BLDG	357	1416315
HUMAN SERVICES BLDG	402	1553761
STATE OFFICE BLDG	484	1891671
Transportation Building	704	2701118
MOTOR TRANSPORT SERVICE	101	389955

Agency: Stevens School Complex

Building	Kilowatts	Kilowatt-hours/year
89 WINTHROP ST	1	4168
CLEVELAND BLDG	10	39414
ADMINISTRATION BLDG	10	41656
HAYDEN BLDG	11	41962
REED BLDG	12	46382
FLAGG DUMMER BLDG	12	48105
BAKER BLDG	15	57333
STEVENS BLDG	25	100354
Department Totals	2604	10154581

Bureau of Public Improvements Electrical Energy Use Audit Compilation

Department: Agriculture

Agency: Agriculture

Building	Kilowatts	Kilowatt-hours/year
SHOP AND GARAGE BLDG (CONY RD)	20	79558
Department Totals	20	79558

Bureau of Public Improvements Electrical Energy Use Audit Compilation

Department: Conservation

Agency: Forestry

Building	Kilowatts	Kilowatt-hours/year
ENTOMOLOGY LAB	6	23369
BOLTON HILL HEADQUARTERS	15	58739
REGIONAL OFFICE	2	9589
GARAGE/OFFICE	4	16820
REGIONAL OFFICE	1	4930
GARAGE/WAREHOUSE	3	12476
RESIDENCE	1	4603
REGIONAL OFFICE	3	11371
WAREHOUSE/GARAGE	5	18048
HANGAR	8	29456
RESIDENCE	1	3982
STORAGE HOUSE	5	19141

Agency: Parks and Recreation

Building	Kilowatts	Kilowatt-hours/year
BUDWORM ANNEX	2	7970
HOLBROOK ISLAND RESIDENCE	1	5513
CAMDEN HILLS PARK RESIDENCE	2	6370
TWO LIGHTS PARK RESIDENCE	4	15817
REID STATE PARK RESIDENCE	3	11050
RESIDENCE	1	5255
SEBAGO LAKE PARK RESIDENCE	2	8135
BRADBURY MT PARK RESIDENCE	1	6228
FORT KNOX PARK RESIDENCE	2	9053
MT BLUE PARK RESIDENCE	3	10944

Agency: Baxter State Park

Building	Kilowatts	Kilowatt-hours/year
GARAGE/WAREHOUSE	5	19420
HEADQUARTERS BLDG	9	35191
Department Totals	90	353470

Bureau of Public Improvements Electrical Energy Use Audit Compilation

Department: Corrections

Agency: Maine Correctional Center

Building	Kilowatts	Kilowatt-hours/year
CONTROL AREA	1	2340
SLAUGHTER HOUSE	2	6968
MAINTENANCE BLDG	3	10210
BARRACKS #3	3	10529
BARRACKS #1	3	10529
BARRACKS #2	3	10529
PASTORAL HOUSE	3	10992
BOILER HOUSE	3	13128
BARRACKS #4	4	14417
MENS PRE-RELEASE	9	34883
VOCATIONAL BLDG	9	35019
KITCHEN/DINING HALL	10	39818
GYMNASIUM	12	49330
HOSPITAL BLDG	12	49815
WAREHOUSE	14	56026
MAXIMUM SECURITY	16	65036
INDUSTRIAL BLDG	25	102693
ADMINISTRATION BLDG	30	119930

Agency: Maine State Prison

Building	Kilowatts	Kilowatt-hours/year
GARAGE	2	9699
PERSONNEL OFFICE	3	12161
RESIDENCE (4 SHIP ST CIRCLE)	3	12945
RESIDENCE (6 SHIP ST CIRCLE)	3	13077
189 MAIN ST	3	13098
185 MAIN ST	4	15926
RESIDENCE (3 SHIP ST CIRCLE)	4	16362
195 MAIN ST	7	26289
INDUSTRIAL SHOPS	68	273467
PRISON	162	654671
SERGEANTS HOUSE	6	23288
VOCATIONAL BLDG	8	32861

Agency: Maine Youth Center

Building	Kilowatts	Kilowatt-hours/year
GROUNDS BLDG	2	6624
BOILER HOUSE	2	9784
HOUSE "B"	3	12124
COTTAGE #5	4	15315
HOUSE "A"	4	17858
HAYDEN BLDG	6	24950
INFIRMARY/SECURITY BLDG	7	26673
COTTAGE #7	8	31905
GOULD SCHOOL	9	34713
COTTAGE #6	9	35309

Bureau of Public Improvements Electrical Energy Use Audit Compilation

COTTAGE #8	9	35309
COTTAGE #9	9	36372
KITCHEN/DINING HALL	9	37019
COTTAGE #2	10	38797
COTTAGE #1	10	39137
COTTAGE #3	10	39597
COTTAGE #4	10	39597
CORNISH BLDG (GYMNASIUM)	19	74846
PURINGTON	16	66193
ADMINISTRATION BLDG	40	159271

Agency: Charleston Correctional Center

Building	Kilowatts	Kilowatt-hours/year
OFFICE/STORAGE BLDG	3	10710
ADMINISTRATION BLDG	4	16547
BARRACKS	5	20248
SEWAGE TREATMENT BLDG	6	30939
RECREATION HALL	16	61185
DINING HALL	16	63267
Department Totals	677	2730320

Bureau of Public Improvements Electrical Energy Use Audit Compilation

Department: Defense & Veterans Services

Agency: Military Bureau

Building	Kilowatts	Kilowatt-hours/year
BLDG #6, CAMP KEYES	6	21646
BLDG #8, CAMP KEYES	16	60527
BLDG #7, CAMP KEYES	39	149713
MAINE VETERANS HOME	55	221210
ARMORY	60	233769
ARMORY	34	137174
ARMORY	8	30840
ARMORY	20	83742
ARMORY	15	62078
ARMORY	8	32281
ARMORY	10	42752
ARMORY	36	139291
ARMORY	19	73893
ARMORY	24	97581
ARMORY	12	45561
ARMORY	19	76616
ARMORY	13	51604
ARMORY	12	48194
ARMORY	9	40507
ARMORY	17	68203
ARMORY	79	310602
ARMORY	18	75704
ARMORY	20	78571
ARMORY	15	62685
ARMORY	18	73647
ARMORY	19	76642
ARMORY	27	109431
ARMORY	37	154349
ARMORY	20	80170
Department Totals	686	2738984

Bureau of Public Improvements Electrical Energy Use Audit Compilation

Department: Education and Cultural Service

Agency: Governor Baxter School for the

Building	Kilowatts	Kilowatt-hours/year
FACULTY RESIDENCE	3	11996
GARAGE	5	20760
HEADMASTER'S RESIDENCE	7	29693
INTERMEDIATE CLASSROOMS	9	38286
HIGH SCHOOL	11	43817
PRIMARY DORM	13	53022
GYMNASIUM	13	54188
BOYS DORM	15	59557
GIRLS DORM	15	59557
SERVICE BLDG	24	96720
PRIMARY CLASSROOM	30	119113

Agency: Unorganized Territory Schools

Building	Kilowatts	Kilowatt-hours/year
Brookton Elementary School	2	9872
Connors Consolidated School	18	72644
Edmunds Elementary School	19	71439
Elementary School	7	28641
Therriault School	9	36561
Department Totals	202	805865

Bureau of Public Improvements Electrical Energy Use Audit Compilation

Department: Inland Fisheries and Wildlife

Agency: Hatcheries

Building	Kilowatts	Kilowatt-hours/year
GOVERNOR HILL GARAGE	1	5716
GOVERNOR HILL RESIDENCE	2	8935
GOVERNOR HILL HATCHERY	3	14309
HATCHERY GARAGE/OFFICE	2	7423
HATCHERY/DWELLING	4	14695
DUPLEX RESIDENCE	4	15766
RESIDENCE	1	2127
DEBLOIS HATCHERY	3	10550
GAME FARM WORKSHOP	0	2026
WILKENSON HOUSE GAME FARM	1	3153
BENTLEY HOUSE GAME FARM	1	3463
WILBUR HOUSE	1	5318
WHITE HOUSE HATCHERY	2	7123
GREEN HOUSE	2	7123
LOWER HATCHERY BLDG	4	15004
RESIDENCE "B"	1	5495
RESIDENCE "A"	1	6002
REGIONAL OFFICE	2	8841
HATCHERY/GARAGE	3	12484
HATCHERY FILTER PLANT	9	44264
RESIDENCE	1	4370
REGIONAL OFFICE/GARAGE	1	4988
HATCHERY	6	24318
RESIDENCE	1	5835
GARAGE	2	9593
HEADQUARTERS BLDG	4	15646
HANGAR	7	27191
HATCHERY BLDG	1	4081
SPRING HOUSE	1	5322
VEADER HOUSE	2	6468
EMBDEN HATCHERY/SHOP	1	4887
EMBDEN POND RESIDENCE	1	5479
WHITE HOUSE	1	3162
GREEN HOUSE	1	4205
OFFICE/GARAGE	1	4880
GARAGE BLDG	1	4021
RESIDENCE	2	9231

Agency: Wardens

Building	Kilowatts	Kilowatt-hours/year
HEADQUARTERS BLDG	3	10196
RIVER HOUSE	1	3581
WARDENS CAMP	1	4038
CAMP	1	3520
HANGAR	2	9492
WARDENS HOUSE	2	9627
WARDENS CAMP	1	4723
FREEMAN WARDENS CAMP	2	5801

Bureau of Public Improvements Electrical Energy Use Audit Compilation

HEADQUARTERS BLDG	1	4230
WARDENS STATION	1	4180
WARDENS HOUSE	0	1918
WARDENS CAMP	3	13105
WARDENS CAMP	2	9115
WARDENS HOUSE	2	7092
Department Totals	105	434112

Bureau of Public Improvements Electrical Energy Use Audit Compilation

Department: Labor

Agency: Employment Security

Building	Kilowatts	Kilowatt-hours/year
EMPLOYMENT SECURITY COMMISSION	69	267114
Department Totals	69	267114

Bureau of Public Improvements Electrical Energy Use Audit Compilation

Department: Maine Maritime Academy

Agency: Academy

Building	Kilowatts	Kilowatt-hours/year
APO/SHIPS BLDG	1	4790
SEXTANT HOUSE	1	5432
HELM HOUSE	2	6275
PENNANT HOUSE	2	6434
ALUMNI HOUSE #2	2	7202
BUOY HOUSE	2	7550
COMPASS HOUSE	2	8162
BINNACLE HOUSE	2	9356
COMMANDANTS HOUSE	3	11432
CAPSTAN HOUSE	4	15472
ANCHOR HOUSE	4	15667
SUPERVISORS HOUSE	4	17093
PROPELLER HOUSE	5	18874
WINDLASS HOUSE	6	22367
QUICK/PLATZ HALL	19	73723
BAGADUCE HALL	20	76888
SMITH GYM	21	78620
ALUMNI HOUSE #1	24	90749
ANDREWS MARINE LAB	21	104643
BARON CASTIN HALL	31	121311
DISMUKES HALL	44	181615
ALEXANDER FIELD HOUSE	91	354841
CURTIS HALL	263	1059748
Department Totals	572	2298245

Bureau of Public Improvements Electrical Energy Use Audit Compilation

Department: Marine Resources

Agency: Marine Resources

Building	Kilowatts	Kilowatt-hours/year
DOCK HOUSE	1	3896
SKUD HOUSE	2	9144
HILL HOUSE	2	9413
CARPENTER SHOP	2	10179
TECHNICAL SERVICES	3	13097
WELCH HOUSE	3	13377
SHOP/STORAGE BLDG	6	21163
BIO-CHEMISTRY LAB	8	31846
AQUARIUM	8	32981
ENVIRONMENTAL LAB	10	42157
FISHERIES LAB	13	52461
SARDINE COUNCIL BLDG	4	15842
Department Totals	63	255555

Bureau of Public Improvements Electrical Energy Use Audit Compilation

Department: Mental Health & Mental Retardation

Agency: Children with Special Needs

Building	Kilowatts	Kilowatt-hours/year
LEVISON CENTER	37	149505
MILITARY & NAVAL CHILDRENS HOM	12	49283

Agency: Mental Health

Building	Kilowatts	Kilowatt-hours/year
NORTON HOUSE	1	4014
RESIDENCE #5	1	5836
PAINT SHOP	1	5934
RESIDENCE #2	1	6298
RESIDENCE #1	1	6298
RESIDENCE #4	2	6884
RESIDENCE #3	2	7914
FARM HOUSE	2	8418
LOCKE HOUSE	2	8508
MACHINE SHOP	3	13188
SOUTH BURLEIGH BLDG	3	13783
BURLEIGH ANNEX	4	17867
GREENHOUSE	5	20453
SCHOOL BLDG	6	24052
NORTH BURLEIGH BLDG	7	27694
GARAGE	9	36678
MECHANICAL BLDG	9	37436
CARPENTRY SHOP	11	43953
LAUNDRY	12	49347
MAXIMUM SECURITY	16	65087
FEMALE PAVILLION BLDG	18	74327
MALE PAVILLION BLDG	19	75041
ADMINISTRATION BLDG	20	79325
CETA BLDG	20	79755
WAREHOUSE	20	80231
BURLEIGH BLDG	22	89165
TYSON BLDG	23	93436
HARLOW BLDG	32	129323
CENTRAL BLDG	39	156464
DEERING BLDG	46	185349
GATE HOUSE	53	201417
ELKINS BLDG	50	202896
GREENLAW BLDG	51	204449
STONE SOUTH BLDG	55	223175
STONE NORTH BLDG	61	244850
MARQUARDT BLDG	62	249755
RAY BLDG	64	256680
STAFF HOUSE #1	2	8444
STAFF HOUSE	2	9547
A-1 BLDG (LAUNDRY)	8	31595
MAINTENANCE BLDG	14	54673
B-1 BLDG	15	61641
HEDIN HALL	16	62858

Bureau of Public Improvements Electrical Energy Use Audit Compilation

B BLDG	24	95750
PRE-RELEASE BLDG	28	113157
C BLDG	47	188135
H BLDG	48	191708
E BLDG	48	192627
F BLDG	50	201641
K BLDG	51	207470
D BLDG	60	243093
A BLDG	78	314374
POOLER PAVILLION	79	317981
SOUTH MAINE RESOURCE CENTER	3	12645
AROOSTOOK RESIDENTIAL CENTER	14	56139

Agency: Mental Retardation

Building	Kilowatts	Kilowatt-hours/year
BERMAN SCHOOL	12	48700
COTTAGE #4	1	4108
COTTAGE #6	1	4290
COTTAGE #1	1	4376
COTTAGE #3	1	4381
COTTAGE #2	1	4834
MORSE HOUSE	2	7744
FIRE STATION	2	8508
BERMAN SCHOOL ANNEX	3	10252
CHAPEL	3	12252
SWIMMING	4	14672
DORIS SIDEWELL HALL	7	27362
DIRIGO HOUSE	7	27821
CONFERENCE CENTER	9	36870
BENDA HOSPITAL WING	10	41264
GRAY HALL	12	48462
STAPLES HALL	12	48462
MAINTENANCE BLDG	13	53631
FEDERATION VILLAGE	14	57753
LAUNDRY BLDG	15	61684
MUSKIE TREATMENT WING	18	70617
SOUCY GYMNASIUM	19	75769
POWNAL HALL	24	95652
VOSBURGH HALL	24	97634
CUMBERLAND HALL	24	97634
DORIS ANDERSON WING	27	110052
HEDIN HOSPITAL	32	130735
KUPELIAN HALL	34	136129
BLISS HALL	34	136129
HAYDEN INFIRMARY	37	149274
COMMONS KITCHEN	50	199940
Department Totals	1845	7424538

Bureau of Public Improvements Electrical Energy Use Audit Compilation

Department: Public Safety

Agency: Maine Criminal Justice Academy

Building	Kilowatts	Kilowatt-hours/year
CONFERENCE BLDG	2	9233
ADMINISTRATION BLDG	7	28029
JEWELL HALL	10	38334
HENNESSEY HALL	11	42150
PARKS HALL	17	65611

Agency: State Police

Building	Kilowatts	Kilowatt-hours/year
GARAGE	16	65364
BARRACKS	33	129073
BARRACKS	6	25463
BARRACKS	6	25606
BARRACKS	5	21228
BARRACKS	5	21421
Department Totals	119	471513

Bureau of Public Improvements Electrical Energy Use Audit Compilation

Department: Transportation

Agency: Aeronautics

Building	Kilowatts	Kilowatt-hours/year
TERMINAL STORAGE BARN	2	7239
OLD TERMINAL BLDG	4	14795
EXECUTIVE PLANE HANGAR	5	18033
AIRPORT MAINTENANCE BLDG	6	24025
TERMINAL/ADMINISTRATION BLDG	18	69142

Agency: Communications

Building	Kilowatts	Kilowatt-hours/year
RADIO TRANSMITTER BLDGS	8	32483

Agency: Division 1

Building	Kilowatts	Kilowatt-hours/year
STORAGE GARAGE	3	9882
STORAGE GARAGE #2	5	19412
STORAGE GARAGE #1	5	19412
STORAGE GARAGE	39	151348
STORAGE GARAGE	3	10611
STORAGE GARAGE	2	8544
STORAGE GARAGE	2	8544
STORAGE GARAGE	5	19412
MAINTENANCE GARAGE	9	35026
STORAGE GARAGE	2	7985
STORAGE GARAGE	3	9882
MAINTENANCE GARAGE	9	35026
DIVISION OFFICE	10	38381
MAINTENANCE GARAGE	13	50986
STORAGE GARAGE	3	10611
STORAGE GARAGE	2	6716
STORAGE GARAGE	3	9882

Agency: Division 2

Building	Kilowatts	Kilowatt-hours/year
STORAGE GARAGE	2	7206
STORAGE GARAGE	2	8544
STORAGE GARAGE	2	8544
STORAGE GARAGE	2	7206
STORAGE GARAGE	2	8544
STORAGE GARAGE	3	13875
DIVISION OFFICE	7	26010
STORAGE GARAGE	1	3808
BRIDGE STORAGE GARAGE	2	6513
STORAGE GARAGE	3	12557
STORAGE GARAGE	3	12557
BRIDGE STORAGE GARAGE	1	2743

MAINTENANCE GARAGE	3	11600
STORAGE GARAGE	2	8544
STORAGE GARAGE	2	7206

Agency: Division 3

Building	Kilowatts	Kilowatt-hours/year
TRACTOR SHED	0	1782
OFFICE/GARAGE (HOGAN RD)	0	724
STORAGE GARAGE (HOGAN RD)	3	10073
STORAGE GARAGE (HOGAN RD)	3	10812
MAINTENANCE GARAGE (HOGAN RD)	10	37456
MAINTENANCE GARAGE (HOGAN RD)	11	42697
GARAGE (MT HOPE AVE)	109	419409
TRACTOR SHED (RTE 69)	1	2852
BRIDGE MAINTENANCE GARAGE	3	11386
MAINTENANCE GARAGE	4	15421
STORAGE GARAGE	2	6610
MAINTENANCE GARAGE	2	7524
STORAGE GARAGE (RTE 9)	4	14034
STORAGE GARAGE	3	12264
MAINTENANCE GARAGE	4	15214
MAINTENANCE GARAGE	3	11319
STORAGE GARAGE	2	6387
STORAGE GARAGE (RTE 11)	8	32596
MAINTENANCE GARAGE	3	12672
MAINTENANCE GARAGE	6	22048
STORAGE GARAGE	2	7322
STORAGE GARAGE	2	8216
STORAGE GARAGE	3	12909

Agency: Division 4

Building	Kilowatts	Kilowatt-hours/year
STORAGE GARAGE (RTE 157)	5	18532
STORAGE GARAGE (RTE 135)	9	33418
STORAGE GARAGE (RTE 2)	9	33784
STORAGE GARAGE #1	2	6985
BRIDGE STO./SIGN SHOP (RTE201)	4	14038
STORAGE GARAGE #3 (RTE 201)	5	20958
MAINTENANCE GARAGE #2 (RTE 201	6	22554
DIVISION OFFICE	13	48895
MAINTENANCE STORAGE (RTE 6)	3	13161
STORAGE GARAGE (RTE 137)	7	28322
STORAGE GARAGE (RTE 201)	5	19596
MAINTENANCE GARAGE	6	22209
STORAGE GARAGE	6	21834
STORAGE GARAGE (RTE 6)	1	5211
PAINT SHOP (BOG RD)	3	11744
STORAGE/MAINTENANCE GARAGE	6	21764
MAINTENANCE GARAGE	8	33536
STORAGE GARAGE	6	24955
STORAGE GARAGE (RTE 3)	9	34597
STORAGE GARAGE (RTE 201)	4	14836

STORAGE GARAGE (RTE 126)	2	7226
STORAGE GARAGE (RTE 126)	2	8443
STORAGE GARAGE (METCALF RD)	9	34159

Agency: Division 5

Building	Kilowatts	Kilowatt-hours/year
STORAGE GARAGE	3	12727
MAINTENANCE GARAGE (RTE 137)	8	31210
STORAGE GARAGE (RTE 3)	3	10052
STORAGE GARAGE	3	12727
STORAGE GARAGE	3	12727
MAINTENANCE & STORAGE GARAGE	9	33868
DIVISION OFFICE (RANKIN ST)	10	38107
STORAGE GARAGE (RTE 90)	3	12727
STORAGE GARAGE (RTE 1)	2	6841
STORAGE GARAGE (RTE 196)	3	12727
STORAGE GARAGE	11	42304
STORAGE GARAGE (RTE 17)	3	12727
MAINTENANCE GARAGE (RTE 17)	8	31210

Agency: Division 6

Building	Kilowatts	Kilowatt-hours/year
STORAGE GARAGE	3	12727
STORAGE GARAGE BLDG #1	3	10052
STORAGE GARAGE BLDG #2	3	10052
TRACTOR SHED BLDG #2	0	1007
EQUIPMENT STORAGE BLDG #1	0	1303
STORAGE GARAGE	2	6708
STORAGE GARAGE	3	12727
STORAGE GARAGE (RTE 202)	2	6294
STORAGE GARAGE	3	12727
STORAGE GARAGE	6	22090
TRACTOR SHED	1	2131
TRACTOR SHED	0	1432
TRACTOR SHED	1	2131
STORAGE GARAGE	3	10052
STORAGE GARAGE	3	10052
STORAGE GARAGE	3	12727
DIVISION OFFICE	39	152515
TRACTOR	1	2131
STORAGE GARAGE	3	10052
STORAGE GARAGE	3	11055
STORAGE GARAGE	6	22090
BRIDGE STORAGE BLDG #3	1	5734
STORAGE GARAGE BLDG #2	3	12727
STORAGE GARAGE BLDG #1	3	12727

Agency: Division 7

Building	Kilowatts	Kilowatt-hours/year
CREW BLDG (HAPPY VALLEY RD)	0	1228

STORAGE GARAGE	3	13128
MAINTENANCE GARAGE	3	13119
STORAGE GARAGE (RTE 108)	2	7187
MAINTENANCE GARAGE	3	12660
STORAGE GARAGE (RTE 122)	1	4935
STORAGE GARAGE (RTE 2)	3	12011
BRIDGE MAINTENANCE GARAGE RTE2	6	22836
DIVISION OFFICE	10	41644
MAINTENANCE GARAGE (RTE 2)	11	43281
CREW BLDG (RTE 4)	0	1236
MAINTENANCE GARAGE (RTE 4)	3	11825
MAINTENANCE GARAGE (RTE 302)	3	9980
STORAGE GARAGE (ALLAN POND RD)	1	5560
STORAGE GARAGE (RTE 4)	2	7081
CREW BLDG (RTE 27)	0	1135
MAINTENANCE GARAGE (RTE 27)	3	11363
STORAGE GARAGE (RTE 5)	2	6493
STORAGE GARAGE (RTE 9)	1	2421
STORAGE GARAGE	1	4825
MAINTENANCE GARAGE (RTE 26)	3	11842
STORAGE GARAGE (RANGELEY RD)	1	4665
STORAGE GARAGE	2	7522
MAINTENANCE GARAGE (FERN ST)	2	9104
CREW BLDG (RTE 2)	0	1335
MAINTENANCE GARAGE (RTE 2)	3	10509
TRACTOR SHED (RTE 16)	1	2283

Agency: Waterways

Building	Kilowatts	Kilowatt-hours/year
FERRY TERMINAL	1	3727
FERRY TERMINAL	0	459
FERRY TERMINAL	0	459
FERRY TERMINAL	2	8000
FERRY TERMINAL	1	4447
FERRY TERMINAL	0	1751
Department Totals	749	2918551

Bureau of Public Improvements Electrical Energy Use Audit Compilation

Department: Vocation Technical Institute System

Agency: Central Maine

Building	Kilowatts	Kilowatt-hours/year
MAINTENANCE GARAGE	2	6407
DORMITORY "A"	3	11398
DORMITORY "B"	3	13295
HIGH RISE DORM	9	41511
JALBERT INDUSTRIAL CENTER	242	931928

Agency: Eastern Maine

Building	Kilowatts	Kilowatt-hours/year
RESIDENCE	1	4463
ACADIA HALL	18	78811
KATAHDIN HALL	29	121488
GYMNASIUM	33	125385
LABORATORY WING	54	211874
ADMINISTRATION/CLASSROOM BLDG	116	448343

Agency: Kennebec Valley

Building	Kilowatts	Kilowatt-hours/year
VOCATIONAL CENTER	134	524241
VOCATIONAL TECHNICAL CENTER	101	387340

Agency: Northern Maine

Building	Kilowatts	Kilowatt-hours/year
PLUMBING & HEATING BLDG	2	7565
MAINTENANCE GARAGE	3	11682
RESIDENCE	3	12581
MAINTENANCE OFFICES	4	16939
MASONRY SHOP	9	35769
BLDG 528	12	46106
AUTO BODY BLDG	19	77094
CARPENTRY BLDG	23	87969
ELECTRICAL BLDG	30	115614
COMMONS BLDG	35	136649
RESIDENCE	38	143809
ANDREWS HALL	44	168583
CHRISTIE BLDG	46	177993

Agency: Southern Maine

Building	Kilowatts	Kilowatt-hours/year
GREENHOUSE	1	3628
HORNE RESIDENCE	1	5015
FISH RESIDENCE	1	5015
PLANT & SOIL TECHNOLOGY BLDG	2	6417

Bureau of Public Improvements Electrical Energy Use Audit Compilation

BOOKSTORE	3	13404
DIRECTORS RESIDENCE	5	17433
WASTEWATER DORM	5	16175
STUDY CENTER	5	21158
ADMINISTRATION BLDG	6	24602
GULF BLDG	7	27506
MAINTENANCE BLDG	8	31720
MARINE SCIENCE BLDG	10	37607
AIR CONDITIONING BLDG	12	47990
HOWE HALL	20	78501
PREBLE HALL	19	80063
AUTO TECHNOLOGY LAB	24	101615
HILDRETH HALL	31	116194
SURFSITE DORME	32	125682
DINING HALL	35	132595
ELECTRICAL BLDG	37	147217
HUTCHINSON UNION GYM	41	159114
SERVICE BUILDING	55	216067
CULINARY ARTS BLDG	59	224499
STUDENT CTR	87	338292
BUILDING CONSTRUCTION	219	833881

Agency: Washington County

Building	Kilowatts	Kilowatt-hours/year
WOOD HARVESTING SHOP	12	47280
REPAIR GARAGE	13	49080
UPPER DORM	21	85680
LOWER DORM	23	92265
SHOP ADDITION	62	237348
ADMINISTRATION/CLASSROOM BLDG	74	294662
MARINE VOCATIONAL CENTER	109	423002
Department Totals	2052	7987541
Statewide:	9853	38919920

Electrical Accounts in CMP Territory Usage Study

Record	Account	Kwh (max.)	Kwh (min.)	Kwh (ave)	Kw (max.) per month	Kw (min.)	Kw (ave.)	Kwh/year
92	027 5000 1 11	1449600.	1049600.	1215262.	3443.	2806.	3138.077	14611200.
20	027 0150 1 11	471600.	215400.	401953.8	1098.	896.	998.0769	4839000.
386	249 2193 1 51	300762.	157584.	221110.6	502.	450.	475.3846	2650116.
557	092 1800 2 41	252800.	0.	177107.7	736.	0.	523.6923	2302400.
578	067 0150 1 31	176400.	132000.	154892.3	426.	354.	386.2308	1866000.
649	302 5140 1 41	198200.	100000.	152307.7	412.	120.	319.8462	1856600.
562	282 3400 1 41	125100.	99300.	111000.	288.	231.	253.4615	1338600.
66	921 3100 1 11	127400.	97020.	110981.2	300.	206.	236.	1328488.
82	916 3120 1 11	113800.	88000.	101230.8	362.	296.	326.3846	1225800.
7	756 3030 1 51	125100.	72900.	99346.16	405.	151.	360.3846	1210500.
293	139 2300 1 11	202800.	0.	62938.46	244.	0.	161.2308	818200.
224	062 3376 1 41	50400.	18800.	39523.08	178.	83.	145.3077	485600.
453	012 2409 1 41	37280.	0.	29649.23	107.	0.	89.84615	385440.
288	162 3300 1 11	69480.	17280.	29276.92	227.	52.	107.3077	363320.
91	960 5340 1 11	37760.	26240.	29415.38	94.	0.	71.23077	353760.
215	391 2155 2 21	30400.	21600.	26535.38	120.	90.	99.46154	318720.
617	029 2170 1 31	34120.	17720.	24507.69	89.	56.	70.76923	298200.
54	917 7100 1 11	46560.	11680.	23778.46	160.	50.	96.84615	297440.
465	048 2060 1 41	25360.	18240.	20910.77	89.	38.	76.07692	253600.
334	601 0090 3 51	36960.	0.	18744.62	74.	0.	57.46154	243680.
213	391 2165 1 21	25200.	12000.	20153.85	104.	44.	73.23077	238800.
118	027 1565 1 35	24080.	4000.	15686.15	56.	31.	37.30769	190960.
115	027 1563 1 35	22439.	0.	15344.54	111.	0.	97.38461	185079.
455	138 1872 1 41	18160.	11280.	14824.62	85.	40.	58.84615	174720.
48	960 5320 2 11	26250.	8970.	14290.77	53.	0.	41.30769	174660.
84	164 2895 3 11	25920.	1800.	13061.54	85.	0.	53.07692	168000.
65	966 0360 1 11	25120.	0.	12664.62	59.	0.	43.46154	155440.
318	751 5080 1 49	17120.	10160.	12732.31	98.	24.	37.69231	152960.
548	094 3400 1 41	16840.	0.	11526.15	48.	0.	39.61538	149840.
325	720 0690 1 51	14960.	9480.	12378.46	58.	45.	52.15385	148840.
77	162 1500 1 11	14400.	9360.	12104.62	49.	0.	41.23077	148000.
57	917 7120 1 11	13360.	11360.	12203.08	74.	42.	45.61538	146160.
12	916 3390 1 11	13360.	10080.	11692.31	41.	34.	36.84615	140080.
121	027 1600 1 35	12880.	8880.	10467.69	46.	30.	36.76923	126080.
573	031 2410 1 31	15280.	6920.	10163.08	63.	22.	31.07692	123200.
547	092 2165 1 41	12240.	0.	9298.462	36.	0.	28.07692	120880.
333	608 1010 1 51	10320.	0.	8981.538	42.	0.	37.38462	116760.
67	914 2640 1 11	15840.	3240.	9560.	42.	24.	34.07692	114760.
290	043 0250 2 11	11240.	7880.	9572.308	35.	28.	30.84615	114640.
321	722 3200 1 49	15120.	1080.	9763.077	50.	8.	33.	111800.
628	302 1880 1 21	11160.	0.	8316.923	52.	0.	40.69231	108120.
494	022 4440 1 31	12040.	0.	8000.	50.	0.	31.23077	104000.
243	384 4040 1 11	12926.	4574.	8320.77	51.	26.	41.30769	102345.
631	021 0260 1 21	10320.	0.	7661.539	46.	0.	36.30769	99600.
35	966 0720 3 11	12880.	4400.	8276.923	194.	0.	102.2308	99120.
43	918 4120 1 11	12080.	6880.	8356.923	46.	20.	28.	98400.
524	264 0444 1 41	10080.	0.	7184.615	37.	0.	30.30769	93400.
541	005 0224 2 25	8880.	0.	7070.769	36.	0.	28.07692	91920.
116	027 1550 1 35	10160.	4960.	7753.846	38.	24.	28.69231	91600.
470	114 4780 2 41	9548.	5718.	7512.154	24.	20.	22.46154	90564.
491	027 0574 1 31	8531.	6749.	7491.769	27.	22.	24.61539	89806.
469	013 0553 2 41	9583.	0.	6734.769	22.	0.	19.30769	87532.
437	139 2801 2 41	8440.	4160.	6880.	37.	20.	28.23077	85280.

Electrical Accounts in CMP Territory Usage Study

Record	Account	Kwh (max.)	Kwh (min.)	Kwh (ave)	Kw (max.) per month	Kw (min.)	Kw (ave.)	Kwh/year
259	249 1690 1 51	9280.	5920.	7052.308	24.	22.	23.53846	83520.
510	933 6190 1 43	9720.	3520.	6803.077	44.	23.	36.76923	83000.
452	149 0358 1 41	10680.	3440.	6729.231	81.	81.	81.	82760.
13	914 0340 1 11	8495.	5196.	6501.539	43.	23.	26.76923	76841.
559	073 1370 1 41	8360.	0.	5723.077	49.	0.	37.46154	74400.
97	106 1246 1 14	7200.	0.	5676.923	54.	0.	34.61538	73800.
626	393 4340 1 21	13064.	748.	5253.692	31.	18.	24.23077	67430.
522	264 0442 1 41	7200.	0.	5141.539	30.	0.	24.30769	66840.
442	029 0100 1 41	8840.	0.	5124.	20.	0.	15.76923	66612.
59	048 2050 1 14	9892.	3344.	5343.615	24.	13.	17.53846	66123.
90	917 6120 5 11	11125.	3028.	5153.615	33.	19.	25.23077	63631.
105	018 5650 1 33	7680.	3240.	5095.385	39.	0.	26.38461	63000.
22	911 4300 1 11	6688.	4109.	5141.923	24.	0.	19.92308	61880.
564	121 4310 1 46	9200.	0.	4578.461	59.	0.	30.15385	59520.
135	012 1115 1 14	9730.	1344.	4682.615	34.	0.	25.23077	59489.
192	421 1571 1 24	6700.	2760.	4820.	28.	0.	20.46154	59260.
61	916 3140 1 11	7650.	3030.	4684.615	30.	15.	21.69231	57870.
58	917 6130 1 11	7436.	2718.	4539.769	19.	10.	14.07692	56046.
405	502 2450 1 54	6200.	0.	4246.154	33.	0.	24.76923	55200.
217	389 0380 1 21	6045.	2958.	4463.615	25.	14.	20.15385	55069.
237	753 0863 2 14	5840.	3760.	4461.539	24.	15.	18.53846	54240.
225	021 0550 1 41	7267.	2708.	4510.539	22.	12.	17.53846	53626.
609	029 2167 1 31	5360.	2720.	4461.539	34.	25.	29.53846	53040.
166	409 3270 1 54	4989.	3792.	4275.231	9.	6.	7.153846	51580.
539	131 5900 1 25	5432.	0.	3957.692	21.	0.	16.76923	51450.
518	521 1405 1 46	5640.	2120.	4040.	26.	17.	21.23077	50400.
136	013 5642 1 14	8400.	0.	4043.077	30.	0.	24.38461	48880.
444	012 2325 2 41	4640.	0.	3741.539	20.	0.	14.46154	48640.
109	469 3035 2 43	4074.	3468.	3901.846	17.	0.	14.30769	46692.
537	005 0880 1 25	4680.	0.	3526.154	27.	0.	17.69231	45840.
101	322 0080 1 14	4560.	2800.	3787.692	24.	0.	20.46154	45360.
427	508 1760 1 21	7360.	780.	3587.692	22.	0.	13.	45120.
14	508 1760 1 21	7360.	780.	3587.692	22.	0.	13.	45120.
647	315 5213 4 41	6218.	0.	3436.385	25.	0.	16.92308	44673.
191	421 1511 1 24	7682.	0.	3623.615	19.	0.	14.46154	44577.
623	024 2390 1 46	4167.	0.	3346.923	10.	0.	7.461538	43510.
96	130 0510 1 14	5100.	2200.	3600.	34.	15.	19.46154	43500.
60	162 2745 4 11	6920.	1140.	3340.385	27.	10.	19.69231	41821.
31	909 3010 1 11	7330.	106.	3252.615	20.	0.	12.15385	41771.
52	530 7800 1 11	5911.	1357.	3321.308	15.	6.	12.38461	41753.
519	048 0890 1 46	3916.	2964.	3447.615	21.	13.	16.53846	40943.
457	220 5242 3 41	3611.	2978.	3346.461	17.	12.	13.46154	40316.
652	344 5500 1 21	8037.	650.	3073.692	17.	3.	10.30769	39287.
463	114 1039 2 41	3970.	2425.	3234.615	11.	9.	9.461538	39096.
226	222 0421 2 24	3573.	0.	3000.	19.	0.	15.84615	39000.
394	522 0040 1 21	4160.	2280.	3120.	22.	7.	17.23077	38080.
576	031 2530 1 31	3832.	2493.	3132.	21.	12.	14.30769	38011.
638	345 0920 1 41	4290.	0.	2882.308	25.	0.	18.46154	37470.
493	025 0292 3 31	4306.	563.	2925.308	15.	0.	11.07692	37466.
422	500 6600 1 21	3658.	0.	2860.923	12.	0.	9.230769	37192.
546	282 2700 1 41	5296.	1863.	3253.692	18.	6.	11.69231	37002.
51	036 0720 1 11	3906.	2354.	3009.461	23.	12.	16.46154	36769.
103	043 1974 2 33	5743.	1582.	2891.231	28.	5.	18.84615	35975.

Electrical Accounts in CMP Territory Usage Study

Record	Account	Kwh (max.)	Kwh (min.)	Kwh (ave)	Kw (max.)	Kw (min.)	Kw (ave.)	Kwh/year
		----------	----------	----------	per month	----------	----------	
424	500 0001 1 21	3519.	0.	2712.	12.	0.	8.769231	35256.
439	138 1895 2 41	8566.	0.	2925.385	21.	0.	14.30769	35096.
302	070 2140 1 31	8728.	0.	2663.461	28.	0.	18.07692	34625.
244	293 0379 1 11	5379.	0.	2646.615	25.	0.	14.84615	34406.
219	389 0840 1 21	6000.	760.	2730.769	22.	8.	14.07692	34340.
88	916 3460 1 11	4048.	2.	2909.461	67.	67.	67.	34288.
330	602 2815 2 51	5421.	0.	2539.539	18.	0.	10.69231	33014.
499	017 3000 1 31	4060.	0.	2530.769	14.	0.	10.53846	32900.
433	031 7300 2 41	3965.	0.	2398.461	8.	0.	6.307693	31180.
76	946 1200 1 11	5679.	497.	2427.077	48.	18.	39.23077	30990.
234	753 1070 1 14	2932.	2099.	2484.385	16.	13.	14.07692	30198.
73	162 2746 4 11	4772.	1180.	2379.923	24.	8.	16.30769	29759.
21	832 2150 1 11	3120.	1920.	2440.	21.	13.	17.07692	29680.
506	413 3270 1 24	3200.	0.	2246.154	29.	0.	19.53846	29200.
392	427 3300 1 21	5160.	952.	2314.077	37.	4.	23.76923	29098.
286	258 4140 1 22	4383.	666.	2323.923	13.	4.	7.615385	29069.
359	438 1820 1 24	3888.	1206.	2377.385	11.	4.	8.461538	28494.
450	129 8055 1 41	2899.	1976.	2322.615	10.	0.	7.692307	28112.
199	203 2950 8 22	5880.	0.	2141.539	29.	0.	11.30769	27840.
15	906 0919 2 11	4829.	1006.	2247.923	18.	0.	13.30769	27281.
157	037 0029 1 22	4494.	502.	2087.539	12.	6.	9.307693	26420.
517	032 3700 3 46	3320.	1780.	2178.461	18.	5.	9.615385	26260.
565	731 6960 1 46	4900.	0.	1993.615	16.	0.	10.46154	25917.
468	138 1883 2 41	2923.	1363.	2069.615	22.	10.	13.46154	25542.
235	753 1080 3 14	5708.	82.	2003.231	19.	2.	10.46154	24926.
579	031 2321 1 31	2676.	0.	1904.769	14.	0.	8.538462	24762.
624	021 0300 1 21	2713.	0.	1868.923	18.	0.	11.61539	24296.
619	059 2570 1 31	3831.	0.	1801.154	15.	0.	10.15385	23415.
676	931 8830 1 43	2256.	1752.	1914.923	17.	7.	11.15385	23010.
327	608 1040 1 51	3320.	0.	1676.923	16.	0.	9.538462	21800.
672	863 2203 3 49	2520.	0.	1661.538	27.	0.	18.23077	21600.
423	500 1831 1 21	4330.	0.	1643.462	15.	0.	10.	21365.
73	914 0360 1 11	1872.	1590.	1752.769	9.	8.	8.230769	21027.
148	265 2248 1 41	5700.	0.	1992.308	33.	0.	9.153846	20500.
126	303 4900 1 54	3420.	327.	1586.308	12.	0.	6.769231	20208.
253	361 0235 1 41	3156.	0.	1540.615	11.	0.	7.076923	20028.
220	389 0880 1 21	2838.	465.	1586.615	11.	4.	8.230769	19768.
513	427 4115 2 43	1745.	1498.	1626.077	11.	9.	9.615385	19509.
601	370 7720 1 11	2918.	564.	1520.231	9.	3.	6.923077	19199.
501	024 1360 1 31	4010.	0.	1476.154	14.	0.	8.846154	19190.
142	043 4400 2 31	2581.	1214.	1582.077	13.	7.	8.769231	19149.
79	162 2748 5 11	3515.	0.	1459.692	19.	0.	10.46154	18976.
230	019 0261 1 22	2428.	0.	1457.615	10.	0.	6.153846	18949.
138	130 0030 1 33	2797.	1167.	1531.	12.	0.	7.153846	18258.
660	513 3390 1 54	1800.	1380.	1513.846	7.	2.	3.692308	18180.
108	051 0200 2 54	3588.	480.	1436.308	15.	4.	9.153846	17964.
668	863 6000 4 49	3020.	0.	1370.769	13.	0.	8.	17820.
369	314 8050 4 54	4757.	0.	1579.692	18.	0.	9.538462	17802.
549	282 3390 1 41	1709.	985.	1410.538	12.	9.	10.23077	16990.
46	918 0630 1 11	3127.	646.	1360.769	10.	6.	7.538462	16977.
370	314 8200 4 54	5522.	0.	1518.615	28.	0.	12.	16970.
498	017 3010 1 31	6066.	0.	1296.538	21.	0.	8.769231	16725.
425	513 4160 1 21	2680.	0.	1280.692	20.	0.	8.692307	16649.

Electrical Accounts in CMP Territory Usage Study

Record	Account	Kwh (max.)	Kwh (min.)	Kwh (ave)	Kw (max.)	Kw (min.)	Kw (ave.)	Kwh/year
		----------	----------	----------	per month	----------	----------	
279	041 1745 1 22	2736.	528.	1320.	17.	3.	11.07692	16560.
585	140 0660 1 14	2030.	895.	1277.	9.	5.	6.615385	15603.
608	182 2520 1 31	2717.	0.	1169.769	13.	0.	9.538462	15207.
420	500 5700 1 21	2360.	0.	1160.	13.	0.	8.	15080.
480	106 0050 8 24	3360.	0.	1153.923	12.	0.	6.076923	15001.
376	314 7700 4 54	5396.	0.	1243.923	42.	0.	17.	14625.
196	202 0606 2 22	1509.	0.	1099.077	8.	0.	6.230769	14288.
55	915 1530 3 11	1757.	750.	1140.308	8.	8.	8.	14074.
266	240 0196 1 51	2856.	0.	1083.692	17.	0.	9.153846	13260.
657	870 3020 1 11	2273.	231.	1004.231	10.	3.	6.461538	12771.
627	021 0250 1 21	1140.	0.	935.6154	8.	0.	7.384615	12163.
674	142 4255 2 11	2259.	249.	945.6154	14.	4.	9.153846	12025.
495	005 1566 1 31	1224.	0.	869.6154	12.	0.	9.076923	11305.
488	512 6900 1 11	1257.	0.	855.1539	10.	0.	7.461538	11117.
486	797 6640 1 11	1257.	0.	855.1539	10.	0.	7.461538	11117.
170	403 3950 4 54	3360.	0.	763.0769	25.	0.	7.076923	9920.
375	314 7550 4 54	3406.	0.	765.4615	24.	0.	9.076923	8914.
665	203 0360 1 24	1654.	0.	600.6923	10.	0.	5.307693	7809.
483	773 4270 1 11	1080.	0.	443.0769	8.	0.	2.076923	5760.
87	530 7820 1 11	480.	192.	365.5385	11.	7.	9.461538	4440.
371	314 7900 4 54	1484.	0.	382.0769	28.	0.	10.15385	4406.
4	750 0130 1 51	200.	40.	144.6154	3.	2.	2.076923	1680.
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				3743229.			11231.62	45610623.

Electrical Accounts in CMP Territory Usage Study

Record	Account	Kwh (max.) per month	Kwh (min.) per month	Kwh (ave) per month	Kwh/year
561	282 2215 1 41	2816.	2110.	2539.	33081.
613	029 2165 1 31	3126.	1340.	2138.461	27895.
416	236 2050 1 24	6543.	175.	2102.769	26862.
382	249 2110 1 51	2930.	1074.	2068.	26842.
317	751 5085 1 49	2386.	1572.	1976.615	25640.
556	282 2205 1 41	2989.	1197.	1914.692	24969.
644	302 5180 1 41	2509.	1608.	1934.385	24835.
258	249 2090 1 51	2390.	1509.	1787.615	23281.
575	031 2470 1 31	2416.	1351.	1755.077	22889.
552	282 2000 1 41	2347.	1205.	1738.154	22677.
451	319 0492 1 41	2243.	0.	1635.923	23050.
184	108 0060 1 24	3469.	439.	1615.846	21458.
459	138 1882 3 41	2383.	1227.	1666.462	21522.
448	190 0149 1 41	1893.	1428.	1675.538	21772.
329	607 0600 1 51	2670.	0.	1533.	21219.
646	245 2295 3 41	2077.	0.	1508.769	21229.
407	730 0130 1 43	1916.	1460.	1600.385	20482.
195	467 0760 1 21	4858.	0.	1434.462	19434.
354	929 2360 1 11	1678.	0.	1424.	19969.
206	302 5710 1 35	2880.	0.	1416.923	20400.
83	915 1510 3 11	2202.	769.	1505.769	19548.
8	755 3190 1 51	1657.	1364.	1509.308	19517.
11	946 1180 1 11	2052.	1197.	1513.692	19630.
630	350 1560 2 21	1800.	1360.	1513.846	19360.
387	249 2150 1 51	1604.	1268.	1457.077	18834.
86	904 5500 1 11	2010.	927.	1436.846	18644.
545	071 1677 1 41	1605.	0.	1345.615	18849.
252	800 2780 1 54	3136.	0.	1315.462	17278.
338	623 1030 1 51	1599.	0.	1296.615	18340.
37	960 5440 1 11	1680.	1162.	1387.308	18021.
72	931 3480 2 11	2610.	397.	1296.077	16945.
356	029 5720 1 25	2897.	175.	1260.538	16456.
111	469 3040 2 43	1412.	1047.	1268.769	16655.
200	205 2060 1 22	1491.	0.	1183.538	16616.
671	853 1221 1 49	1949.	890.	1262.385	16326.
267	243 3530 1 51	1523.	1131.	1274.231	16675.
558	282 2880 1 41	1642.	981.	1256.231	16416.
362	060 5400 1 31	2376.	216.	1180.	15509.
102	118 0070 1 14	1706.	0.	1119.692	15784.
492	017 2990 1 31	1390.	0.	1105.154	15482.
47	918 0620 1 11	1544.	740.	1182.	15180.
434	214 7580 1 41	1832.	264.	1109.231	15958.
33	922 7600 2 11	1455.	751.	1143.231	15085.
124	211 1690 1 54	1530.	571.	1122.154	14601.
270	243 3320 1 51	1410.	860.	1105.308	14473.
615	029 2180 2 31	1605.	756.	1105.923	14523.
230	222 0870 1 24	1394.	0.	1024.846	14349.
1	011 4200 1 46	1930.	465.	1038.231	13764.
119	514 0330 1 35	1251.	945.	1078.846	14071.
106	212 1480 1 21	2164.	322.	1032.385	13500.
281	019 1553 1 22	1384.	0.	982.3846	13600.
563	054 4220 1 25	1998.	0.	970.6154	13102.
636	027 1007 1 26	1983.	0.	969.9231	13053.

Electrical Accounts in CMP Territory Usage Study

Record	Account	Kwh (max.) per month	Kwh (min.) per month	Kwh (ave) per month	Kwh/year
161	036 1368 1 22	1706.	0.	969.1539	13420.
357	425 1499 1 24	1150.	922.	1036.538	13505.
446	010 0578 1 41	1241.	733.	1022.462	13344.
572	031 2440 1 31	1591.	720.	1013.692	13447.
461	184 1200 1 41	1909.	0.	1025.769	13404.
36	916 3200 1 11	1861.	247.	943.8461	12577.
344	044 0560 1 31	2067.	37.	938.	12700.
553	092 1750 1 41	2187.	0.	902.6154	11806.
94	234 1520 1 24	2310.	185.	913.9231	11963.
50	530 7720 1 11	1202.	826.	964.3846	12628.
251	800 2760 1 54	2738.	0.	880.6923	11900.
436	146 0093 2 41	1076.	852.	941.6923	12191.
335	623 1310 4 51	1836.	0.	865.	11650.
168	409 3250 1 54	1202.	712.	911.3077	12057.
358	438 1835 1 24	1063.	753.	926.	12047.
263	243 3390 1 51	1118.	705.	897.5385	11812.
172	403 3330 1 54	1353.	0.	840.6923	11567.
221	037 2720 1 21	1105.	665.	887.6154	11555.
322	563 6660 1 33	1272.	0.	823.1539	11400.
551	282 2210 1 41	1663.	189.	837.2308	10867.
68	915 1520 3 11	1408.	467.	875.5385	11179.
478	377 6920 1 11	1706.	0.	804.	10783.
145	247 4740 1 25	1940.	110.	809.4615	10575.
505	040 0600 3 26	1099.	324.	849.7692	11351.
274	243 1940 1 51	976.	549.	832.3846	11065.
276	247 1732 1 51	1513.	151.	832.0769	10899.
454	138 1549 1 41	1095.	524.	804.6923	10501.
271	240 0195 1 51	1283.	223.	777.5385	10282.
296	035 0594 1 22	1240.	0.	746.3846	10550.
347	536 0060 1 24	895.	728.	804.4615	10453.
661	119 0005 2 14	1232.	537.	811.6923	10551.
471	010 0584 1 41	853.	728.	795.3846	10383.
583	031 2340 1 31	1002.	658.	786.2308	10105.
85	916 3350 1 11	1246.	0.	789.	10285.
580	031 2480 2 31	874.	560.	765.9231	10019.
544	505 0180 1 54	953.	0.	709.1539	9869.
346	736 0911 1 14	854.	0.	698.7692	9759.
477	104 5140 1 33	949.	0.	695.3077	9804.
139	130 4190 1 33	1050.	507.	732.6154	9645.
520	120 1135 1 46	904.	659.	740.1539	9594.
515	048 1040 1 46	904.	659.	740.1539	9594.
193	702 3410 1 54	1269.	0.	671.5385	9208.
603	340 0060 2 35	786.	641.	721.3077	9393.
277	705 0050 1 51	1297.	0.	662.5385	9021.
487	774 4520 1 11	1456.	0.	659.4615	9393.
432	339 2380 1 51	1457.	0.	654.	8755.
568	216 0550 1 24	776.	535.	694.2308	9198.
654	458 2390 1 11	833.	0.	651.5385	9138.
355	334 2390 1 51	927.	0.	646.	8997.
185	400 2975 1 35	812.	0.	637.3077	8923.
3	046 1380 1 25	1482.	184.	647.9231	8403.
350	112 1720 1 24	1271.	304.	644.0769	8494.
379	402 0060 1 54	1506.	0.	618.7692	8578.

Electrical Accounts in CMP Territory Usage Study

Record	Account	Kwh (max.) per month	Kwh (min.) per month	Kwh (ave) per month	Kwh/year
18	036 0700 1 11	1628.	10.	611.3846	7937.
122	760 1520 1 14	889.	335.	644.6154	8485.
305	522 2060 1 24	1213.	0.	600.6923	8198.
438	138 1879 4 41	1262.	177.	613.3077	8071.
383	247 1620 1 51	1126.	441.	641.6154	8345.
670	853 1225 1 49	1006.	391.	630.0769	8163.
222	021 0608 1 41	744.	517.	638.4615	8313.
600	514 0180 1 54	865.	459.	652.4615	8249.
45	038 0389 1 26	1367.	95.	628.7692	8343.
667	057 1431 2 14	1658.	0.	583.6154	7587.
32	057 1431 2 14	1658.	0.	583.6154	7587.
218	391 4120 3 21	1945.	44.	637.5385	8074.
429	331 3640 1 51	1500.	0.	576.9231	8340.
5	736 3970 1 51	1647.	211.	594.4615	7831.
595	388 4360 1 21	978.	488.	614.6154	8037.
581	031 2400 1 31	673.	541.	613.2308	8027.
285	019 0263 1 22	694.	0.	563.3846	7909.
189	125 0995 1 22	697.	0.	561.4615	7835.
144	052 1120 1 31	1666.	4.	670.0769	8148.
571	031 2330 1 31	684.	515.	594.3846	7813.
173	409 3240 1 54	770.	493.	597.3846	7828.
162	309 0060 1 24	1155.	0.	552.9231	8272.
264	243 3350 1 51	956.	430.	584.5385	7732.
178	201 4270 1 11	1061.	0.	549.	7447.
339	077 3410 1 31	2317.	0.	674.5385	7513.
542	605 6090 1 49	843.	0.	547.9231	7715.
441	146 0083 2 41	650.	469.	587.7692	7702.
630	302 5500 2 41	2011.	62.	545.	7152.
663	119 0365 1 14	641.	479.	579.5385	7518.
110	469 3043 1 43	1304.	0.	531.3077	8169.
250	800 2800 1 54	1839.	0.	527.6923	6933.
535	001 2765 1 25	897.	0.	527.	7357.
592	076 2250 1 31	934.	0.	519.4615	7188.
245	797 4000 1 11	823.	0.	516.7692	7376.
620	059 2560 1 31	847.	0.	516.1539	7241.
49	918 0640 1 11	682.	415.	548.3846	7218.
445	112 0970 1 41	1641.	0.	552.1539	7151.
28	918 0922 2 11	839.	0.	505.2308	6568.
262	243 1910 1 51	650.	457.	527.0769	6900.
348	217 5700 1 54	1588.	0.	488.3846	6495.
275	243 3260 1 51	667.	335.	523.9231	6958.
364	003 0849 1 26	912.	85.	534.9231	6922.
635	237 5420 3 24	1680.	0.	553.8461	6600.
194	421 1551 1 24	881.	271.	492.	6463.
353	136 3090 1 46	848.	273.	491.9231	6432.
540	010 6190 1 25	639.	0.	456.7692	6504.
596	388 1960 1 21	1245.	47.	457.6923	5964.
182	962 0615 1 46	1241.	49.	454.3846	6057.
268	243 1950 1 51	812.	307.	475.	6142.
479	115 0960 1 24	619.	359.	481.3077	6340.
404	301 3600 1 25	667.	276.	465.3846	6155.
378	314 7800 1 54	1485.	0.	481.2308	5941.
332	623 1300 3 51	769.	0.	440.4615	6157.

Electrical Accounts in CMP Territory Usage Study

Record	Account	Kwh (max.) per month	Kwh (min.) per month	Kwh (ave) per month	Kwh/year
273	243 3450 1 51	1332.	65.	445.6154	5913.
543	503 0120 2 54	817.	0.	432.9231	6038
176	409 3290 1 54	703.	339.	463.8462	5991
256	243 3300 1 51	592.	285.	453.8462	5902.
527	011 0595 1 33	1292.	0.	420.4615	5696.
27	921 1500 1 11	917.	205.	450.5385	5590.
81	916 3419 1 11	677.	235.	439.3077	5768.
397	610 2630 1 49	787.	224.	427.0769	5620.
440	010 0577 1 41	704.	354.	435.9231	5678
523	080 7385 1 41	894.	192.	420.5385	5518.
507	401 0985 3 24	607.	0.	391.0769	5400.
389	322 2230 2 35	852.	84.	397.0769	5253.
99	106 0844 1 14	601.	0.	386.9231	5502.
100	106 1905 1 14	643.	0.	385.3077	5555.
128	420 0880 1 35	1209.	0.	462.0769	5640.
38	916 3160 1 11	886.	217.	396.0769	5187.
430	331 3450 1 51	1132.	0.	378.9231	6058.
311	314 2430 1 35	1100.	0.	372.5385	4935.
336	608 0586 1 51	601.	0.	372.1538	5165.
534	131 4620 1 25	818.	0.	371.7692	5207.
426	500 2900 1 21	520.	0.	368.3846	5179.
223	256 6504 1 41	1446.	0.	381.6154	5111.
131	041 5070 1 33	1061.	64.	371.2308	4829.
388	224 3405 1 24	542.	0.	362.8462	5022.
291	139 2110 1 11	540.	0.	359.9231	4975.
645	302 5320 2 41	649.	173.	383.9231	5023.
590	076 2230 1 31	712.	0.	353.	4862.
210	212 0350 1 25	507.	0.	346.9231	4782.
421	500 2840 1 21	500.	0.	345.3077	4857.
431	334 3530 1 51	540.	0.	342.3077	4710.
669	363 5900 1 49	504.	0.	341.9231	4712.
598	118 0965 2 33	488.	11.	339.8462	4736.
153	027 0425 4 26	911.	0.	334.3077	4437.
456	031 7100 1 41	513.	0.	329.6923	4604.
554	070 3941 1 41	681.	0.	323.5385	4265.
117	027 1570 1 35	675.	221.	342.1538	4446.
143	052 1110 1 31	536.	255.	344.9231	4423.
6	756 3150 1 51	576.	123.	328.4615	4309.
134	030 3270 1 14	467.	20.	340.6154	4449.
324	029 1230 1 46	1331.	28.	314.4615	4086.
171	409 3300 1 54	836.	0.	350.4615	4440.
337	621 1580 1 51	555.	0.	303.3846	4339.
331	608 1020 1 51	760.	0.	295.3846	4200.
476	104 5110 1 33	382.	0.	294.5385	4110.
261	243 1920 1 51	352.	265.	311.6154	4084.
414	236 2060 1 24	2884.	0.	512.8461	4287.
16	959 0300 1 11	383.	126.	295.2308	3855.
208	212 0353 1 25	685.	0.	284.0769	3935.
588	436 0020 1 51	331.	0.	282.9231	3963.
306	527 2235 1 24	332.	0.	281.5385	3941.
491	855 2100 1 11	341.	0.	280.4615	3939.
328	720 0695 1 51	541.	0.	280.2308	3643.
482	771 1300 1 11	410.	0.	.280.	3955.

Electrical Accounts in CMP Territory Usage Study

Record	Account	Kwh (max.) per month	Kwh (min.) per month	Kwh (ave) per month	Kwh/year
412	195 4400 1 11	362.	238.	297.2308	3916.
120	027 1580 1 35	418.	208.	296.8462	3906.
602	041 3090 1 33	736.	89.	282.8462	3723.
320	744 1080 1 49	870.	0.	273.8462	4240.
637	027 1121 1 26	520.	0.	272.7692	3913.
159	043 1300 1 22	1164.	18.	273.2308	3546.
377	314 8520 1 54	731.	39.	278.0769	3568.
555	282 1705 1 41	841.	17.	329.3077	4251.
577	031 2320 1 31	483.	135.	283.6923	3765.
272	247 1720 1 51	472.	16.	262.6923	3547.
214	389 0860 1 21	738.	80.	266.2308	3538.
207	704 0558 1 49	342.	0.	250.6154	3600.
303	070 2058 1 31	395.	0.	249.6923	3465.
449	010 0581 1 41	316.	221.	269.5385	3517.
593	564 2435 1 21	797.	0.	248.0769	3301.
599	206 0970 1 24	469.	0.	239.9231	3282.
80	530 7700 1 11	566.	136.	247.8462	3264.
209	212 0351 1 25	288.	0.	235.3846	3298.
642	291 2475 2 41	272.	0.	235.3846	3297.
655	859 0900 1 11	284.	0.	235.2308	3314.
489	771 1280 1 11	418.	0.	233.6923	3092.
165	406 8400 1 54	275.	231.	252.3846	3266.
180	201 5020 1 11	270.	0.	231.9231	3250.
586	437 1825 1 51	278.	0.	231.6923	3244.
639	208 0350 1 24	274.	0.	231.	3264.
183	251 1025 1 41	363.	0.	230.	3245.
525	301 2970 1 41	278.	0.	229.8462	3243.
246	405 2350 1 14	855.	0.	227.6154	3081.
140	944 2957 1 43	269.	225.	244.1538	3181.
149	266 4885 1 41	821.	0.	288.9231	3545.
130	036 1340 2 33	261.	225.	244.1538	3160.
240	087 0175 1 31	375.	0.	223.7692	3284.
188	121 1091 1 22	276.	0.	222.8462	3140.
662	119 0510 1 14	308.	147.	242.6923	3136.
323	945 0810 2 43	269.	0.	221.2308	3104.
443	031 4800 1 41	562.	0.	219.0769	2848.
633	233 1750 1 24	304.	162.	227.4615	2954.
410	195 4460 1 11	500.	66.	236.3077	3143.
367	406 0210 1 54	330.	130.	225.6154	2948.
232	220 5660 1 24	572.	22.	214.6923	2901.
464	146 0077 3 41	395.	120.	224.	2853.
297	524 2230 1 46	309.	159.	228.1538	2979.
391	508 1460 2 21	262.	0.	210.6154	2966.
98	102 1871 1 14	306.	154.	223.1538	2954.
569	004 0245 1 33	480.	0.	207.6923	3180.
187	443 6320 1 43	252.	0.	206.2308	2910.
56	162 2747 4 11	437.	85.	218.2308	2742.
89	909 3250 1 11	396.	83.	211.3077	2751.
411	195 4420 1 11	317.	138.	214.3846	2849.
287	258 4141 1 22	340.	141.	215.5385	2800.
310	098 0960 1 35	331.	0.	200.7692	2941.
384	745 3320 1 51	521.	0.	219.5385	2674.
343	312 1240 1 24	554.	108.	209.1538	2762.

Electrical Accounts in CMP Territory Usage Study

Record	Account	Kwh (max.) per month	Kwh (min.) per month	Kwh (ave) per month	Kwh/year
345	044 0540 1 31	440.	120.	212.3077	2620
163	309 0030 1 24	409.	0.	197.7692	2950
532	406 2310 1 46	282.	0.	191.0769	2701
107	383 0440 1 21	363.	100.	193.3077	2558.
629	021 0245 1 21	275.	0.	178.7692	2477.
129	420 0760 1 35	308.	88.	186.2308	2608.
70	530 1550 1 11	279.	147.	189.6923	2538.
373	314 7400 1 54	733.	0.	206.7692	2431.
584	028 2900 2 31	419.	0.	174.7692	2445.
567	012 3400 1 33	207.	0.	174.3077	2439.
398	252 2865 1 41	204.	0.	172.6923	2440.
368	314 7200 1 54	700.	0.	172.3846	2586.
44	959 0420 1 11	282.	102.	187.8462	2454.
349	704 5620 1 54	280.	47.	187.3846	2433.
289	929 0300 1 11	214.	0.	169.5385	2290.
533	231 5500 1 21	374.	78.	186.8462	2302.
594	561 1982 2 21	202.	0.	167.4615	2352.
621	024 2180 4 46	198.	0.	166.	2335.
458	048 2020 2 41	225.	86.	171.1538	2271.
204	306 6935 1 35	191.	0.	163.1538	2303.
622	025 3696 1 46	203.	145.	173.	2233.
151	265 5140 1 41	273.	6.	160.	2129.
634	233 2870 1 24	297.	90.	167.	2192.
664	119 1045 2 14	254.	99.	166.6923	2161.
255	243 1900 1 51	204.	114.	172.6923	2244.
606	014 1200 1 31	267.	0.	157.6154	2163.
484	770 4600 1 11	282.	0.	157.1538	2153.
123	214 3125 1 54	197.	137.	171.8462	2233.
164	403 3600 1 54	703.	0.	154.6154	2011.
473	216 5920 1 41	265.	78.	156.2308	2025.
260	243 1990 1 51	241.	68.	165.8462	1983.
186	408 0789 1 35	243.	0.	144.3077	2007.
39	916 3180 1 11	414.	6.	144.3846	1903.
340	077 3400 1 31	210.	106.	151.1538	1994.
179	198 0760 1 11	164.	0.	138.2308	1957.
174	403 3280 1 54	285.	0.	136.5385	1882.
241	087 0060 1 31	190.	0.	135.7692	1909.
526	264 0430 1 41	197.	0.	135.0769	1909.
307	308 6120 1 35	227.	0.	134.2308	1939.
531	203 3050 1 46	397.	0.	133.3846	1796.
203	300 3925 1 35	427.	0.	133.	1817.
500	017 2970 1 31	257.	0.	132.9231	1867.
248	405 2075 1 14	209.	0.	130.1538	1800.
104	023 0225 1 33	278.	96.	137.6923	1795.
605	182 2500 1 31	208.	0.	129.2308	1796.
301	068 1660 2 31	462.	0.	126.	1638.
390	416 0030 1 35	262.	0.	125.4615	1893.
300	442 1775 1 43	144.	0.	119.8462	1692.
312	453 1320 1 43	1265.	0.	119.5385	1753.
284	027 4345 1 22	142.	109.	129.	1665.
298	442 1975 1 43	139.	0.	116.4615	1644.
17	959 0440 1 11	203.	80.	126.1538	1664.
341	078 2473 1 46	314.	53.	119.0769	1553.

Electrical Accounts in CMP Territory Usage Study

Record	Account	Kwh (max.) per month	Kwh (min.) per month	Kwh (ave) per month	Kwh/year
400	410 3070 1 35	353.	0.	109.	1431.
616	020 0020 1 31	173.	0.	104.2308	1429.
29	530 7710 1 11	586.	0.	102.4615	1332.
238	055 1998 1 14	209.	0.	100.3846	1312.
385	249 2190 1 51	171.	60.	102.8462	1341.
393	522 0010 1 21	370.	0.	97.	1261.
181	524 1090 1 46	351.	0.	96.	1248.
643	302 5300 1 41	187.	48.	98.23077	1296.
236	749 1490 1 14	197.	0.	94.53846	1420.
381	249 2130 1 51	376.	17.	101.1538	1259.
2	947 5750 1 43	113.	93.	100.7692	1314.
283	019 1552 1 22	207.	0.	93.23077	1336.
395	508 1400 1 21	149.	0.	89.61539	1314.
666	644 4580 1 14	114.	0.	88.53846	1254.
589	076 2240 1 31	294.	0.	88.23077	1441.
570	027 0647 1 26	146.	0.	85.46154	1169.
418	429 5200 1 14	224.	9.	90.23077	1124.
294	172 2625 1 14	118.	0.	84.23077	1150.
63	916 3430 1 11	365.	13.	88.84615	1071.
175	403 4050 1 54	364.	0.	79.46154	1048.
292	142 4224 5 11	466.	0.	85.76923	1084.
64	142 4224 4 11	466.	0.	85.76923	1084.
374	314 7420 1 54	394.	0.	86.15385	1036.
247	405 2300 1 14	215.	0.	78.30769	1150.
396	247 1640 1 51	138.	45.	84.69231	1099.
604	340 1700 3 35	93.	71.	83.23077	1084.
308	098 1525 1 35	246.	0.	75.84615	1098.
530	008 2000 1 33	212.	0.	71.69231	987.
352	025 3300 1 46	206.	0.	70.23077	913.
380	403 0800 1 54	141.	0.	68.07692	973.
229	203 0980 1 24	150.	0.	62.61538	830.
42	918 4160 1 11	72.	61.	65.38461	855.
659	020 2180 3 35	149.	0.	60.30769	784.
474	216 6100 1 41	117.	7.	68.69231	866.
591	059 2580 3 31	107.	0.	57.84615	753.
133	032 0018 1 14	129.	0.	65.46154	864.
299	441 5770 1 43	157.	0.	57.	757.
514	106 1580 1 24	137.	0.	54.07692	709.
227	241 3590 1 24	154.	0.	64.07692	824.
269	243 1970 1 51	118.	4.	53.	740.
504	052 0505 1 26	521.	0.	50.84615	1182.
160	044 1050 1 22	146.	0.	49.61538	645.
502	057 4335 1 31	140.	0.	48.92308	640.
295	518 0400 1 54	133.	0.	53.53846	704.
156	044 1060 1 22	127.	0.	48.69231	633.
587	431 2790 1 51	65.	0.	48.30769	680.
406	807 1024 1 49	143.	0.	48.30769	644.
511	708 6220 1 43	248.	0.	58.69231	687.
409	506 2770 1 54	81.	0.	46.76923	650.
125	301 0020 1 54	220.	0.	45.07692	586.
625	350 1580 3 21	240.	0.	43.23077	562.
150	266 4890 1 41	62.	31.	46.15385	602.
475	104 5130 1 33	144.	0.	41.38462	682.

Electrical Accounts in CMP Territory Usage Study

Record	Account	Kwh (max.) per month	Kwh (min.) per month	Kwh (ave) per month	Kwh/year
198	209 3250 1 22	74.	0.	45.30769	596.
228	241 4877 1 24	85.	0.	45.23077	551.
137	030 3310 1 14	70.	0.	43.15385	564.
467	048 2030 2 41	97.	0.	38.46154	504.
249	405 2425 1 14	125.	0.	36.61538	506.
516	028 1730 1 46	153.	0.	48.15385	563.
278	019 0235 1 22	60.	0.	36.15385	513.
114	506 3630 2 35	110.	0.	35.	455.
673	858 1030 1 49	124.	0.	34.76923	452.
265	247 1730 1 51	49.	27.	36.53846	480.
472	216 6140 1 41	80.	0.	37.69231	489.
155	027 0430 1 26	87.	0.	31.46154	421.
653	106 0525 2 33	207.	0.	30.07692	391.
211	116 2405 1 24	37.	28.	32.38462	425.
656	860 1900 1 11	93.	0.	35.53846	372.
26	210 0317 1 41	45.	19.	31.84615	403.
462	210 0317 1 41	45.	19.	31.84615	403.
212	117 1200 1 24	51.	16.	29.76923	387.
326	630 0730 1 51	82.	0.	27.38461	356.
607	340 2870 2 35	40.	14.	29.15385	390.
154	050 0400 1 26	126.	0.	32.23077	374.
365	053 1240 1 25	152.	0.	31.61539	420.
216	389 0900 1 21	290.	0.	24.76923	324.
610	029 2195 1 31	89.	0.	26.23077	353.
169	403 3970 1 54	92.	0.	24.46154	334.
632	233 3010 1 24	124.	0.	27.69231	348.
177	959 5505 1 11	141.	0.	23.84615	310.
167	403 3370 1 54	119.	0.	22.92308	302.
648	302 5260 3 41	87.	0.	22.84615	297.
141	052 1140 1 31	74.	0.	24.92308	298.
417	429 5400 1 14	58.	1.	24.15385	280.
316	716 3640 1 49	77.	0.	20.38461	278.
309	098 0980 1 35	49.	0.	16.30769	246.
399	418 3390 2 35	19.	16.	17.30769	223.
428	508 1780 1 21	42.	0.	15.69231	218.
401	089 3280 2 35	19.	15.	17.	220.
512	708 6240 1 43	94.	0.	17.61539	191.
23	832 2050 1 11	90.	0.	14.23077	187.
205	302 4630 1 35	100.	0.	13.92308	191.
242	702 3850 1 54	56.	0.	13.	173.
351	136 3000 2 46	97.	0.	13.15385	170.
147	265 1670 1 41	44.	0.	12.30769	168.
574	034 2060 1 31	15.	0.	11.46154	163.
611	029 2200 1 31	130.	0.	10.69231	139.
402	418 1110 2 35	20.	9.	12.	154.
372	402 0050 1 54	34.	0.	9.692307	142.
53	966 1000 1 11	114.	0.	18.07692	147.
146	266 4880 1 41	65.	0.	9.923077	137.
536	131 5890 1 25	23.	0.	8.692307	113.
435	210 0315 1 41	23.	0.	8.538462	107.
304	070 2120 1 31	100.	0.	7.769231	101.
319	751 8630 1 49	59.	0.	7.461538	97.
112	042 3109 1 22	21.	0.	6.307693	98.

Electrical Accounts in CMP Territory Usage Study

Record	Account	Kwh (max.) per month	Kwh (min.) per month	Kwh (ave) per month	Kwh/year
127	420 0820 1 35	30.	0.	6.076923	73.
233	749 1492 1 14	18.	0.	5.307693	76.
363	073 1300 1 33	21.	0.	5.538462	66.
460	210 0311 5 41	27.	0.	3.923077	67.
361	060 0645 1 22	200.	0.	19.	47.
231	222 0415 3 24	13.	0.	2.307692	30.
152	850 2580 1 49	15.	0.	2.615385	30.
641	212 0660 2 24	120.	0.	9.846154	8.
447	210 0308 2 41	2.	0.	0.615385	6.
366	053 1230 2 25	156.	0.	12.30769	8.
113	524 2340 1 35	1.	0.	0.384615	4.
640	212 0925 1 24	2.	0.	0.230769	3.
132	306 0710 1 54	6.	0.	0.692308	6.
314	240 3460 1 24	1.	0.	0.153846	3.
197	206 3200 3 22	1.	0.	0.153846	2.
257	243 3410 1 51	1.	0.	0.076923	2.
				193945.2	2581604.