

A STUDY OF ENERGY COSTS AND ENERGY
ASSISTANCE IN KOSCIUSKO COUNTY

BY 1985-1986 K.L.A. CLASS MEMBERS

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The rising costs of energy affects all people in all walks of life. Today, more than ever, efforts must be made to reduce the consumption and waste of energy and to seek alternatives to the rising costs for both those who can afford to pay the energy costs and those who cannot. The purpose of this study is threefold. One, is to compare the relative energy cost of local utilities and forms of energy. Two, is to offer information to those who may be considering changing the primary form of energy consumed in their home. Third, to describe and outline energy assistance programs for those needy individuals requiring help with their energy bills.

Have you ever wondered whether you would be better off replacing your old furnace with a new one? And if you did, should your new furnace be gas or electric?

Most homeowners would agree that they have considered these questions. But how does a homeowner find the answers? Both your local utility company and any reputable heating contractor can provide assistance.

For those who would prefer to answer some of the questions on their own, the following information should be helpful.

Selection of a heating system begins with the selection of the fuel source to be used. The four primary fuels available, along with their Btu content are:

Natural gas...	100,000 Btu/CCF	Electricity...	3,413 Btu/kw
Heating oil...	140,000 Btu/gal.	Propane.....	92,000 Btu/gal.

Since the Btu content and price of each fuel is different, comparing them is difficult. Normally for comparison purposes, the cost of each fuel is converted to a common unit called a "therm". A therm is equal to 100,000 Btu's. The cost of one therm (100,000 Btu's) of each fuel is listed below:

Natural Gas (NIPSCO).....	\$.44
Electric (NIPSCO).....	2.92
(REMC).....	1.89
Fuel Oil.....	.54
Propane.....	.95

NOTE: The cost per therm is based on 4/28/86 prices and reflects the lowest marginal cost achieved on each rate.

The cost of purchasing a therm of each fuel varies considerably. However, when considering the purchase of a new heating system, the cost of the actual heat produced is most important.

For example, an older, well tuned gas furnace has an efficiency rating of 60%. This means that for every therm of fuel purchased, only 60% is converted to useable heat. The remaining 40% is lost up the chimney.

Since the efficiency of heating systems and fuel costs vary, a comparison of the cost of the useable heat must be made. The cost of the useable heat can be found by dividing the "per therm" cost by the efficiency of the equipment.

From our example above, the useable heat cost/therm for a gas furnace is \$.73. Notice that the cost of the useable heat is higher than the cost per therm of fuel. Purchasing more efficient

equipment will lower the cost of the useable heat. Outlined below are some of the more common heating units available with their output heat costs.

	<u>Efficiency Rating</u>	<u>Output Cost/Therm</u>
Natural Gas:		
Standard gas furnace	\$.60	\$.73
Pulse gas furnace	.97	.45
Electricity: (NIPSCO)		
Electric heat pump	1.80	1.62
Geothermal heat pump	2.80	1.04
Electricity: (REMC)		
Electric heat pump	1.80	1.05
Geothermal heat pump	2.80	.68
Fuel Oil:		
Oil Furnace	.55	.99
Propane:		
Propane furnace	.60	1.59
Propane pulse furnace	.96	1.00

NOTE: The output cost/therm is rounded to the nearest cent.

With the above information, you can compare the various fuel sources and furnaces. Deciding whether to replace a furnace requires considering additional factors such as the size of your home, estimates of total energy consumed to heat your home, and the cost of the new equipment with installation. After considering these factors, you will be able to determine the payback on your investment.

To apply this procedure to other equipment, you will need their efficiency ratings and then by dividing the "per therm" cost by the efficiency rating, you will find the output cost/therm. However, if you feel uncomfortable crunching through the numbers on your own, assistance is available from your utility company.

The same type of evaluation can be used on other appliances such as water heaters and clothes dryers, providing you have their efficiency ratings. Replacement of older furnaces, water heaters, or clothes dryers is only one way to conserve energy and reduce utility bills. There are many things that you can do with little or no costs.

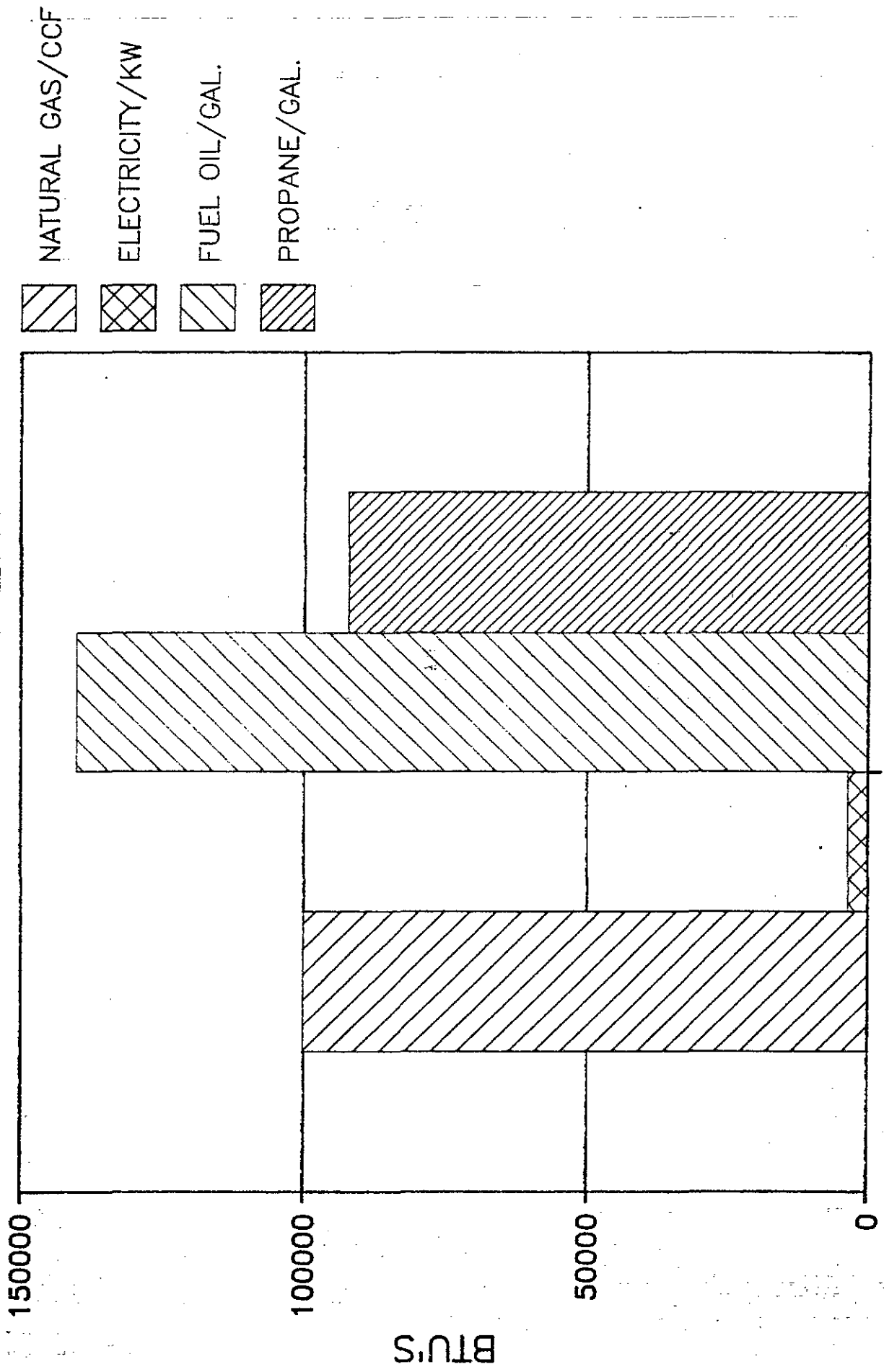
Prior to the heating season, you should have your furnace serviced and change the filters. Check your insulation, weather stripping and caulking. Then set your thermostat at the lowest comfortable setting. For every degree that your thermostat is set below 68, there is about a 3% savings in annual heating cost.

In the summer, your air conditioning system should be checked and filters replaced. Again, proper insulation and weather stripping will reduce costs. Awnings, window shades or curtains over sunny windows also help. Set the thermostat to the highest temperature that is comfortable. Each one degree change in the thermostat will affect operating costs by 5% to 8%.

The water heater is a major user of energy. The heat setting should be adjusted to the lowest setting that meets the needs of the family. Insulating the water heater with an insulation blanket will reduce heat losses.

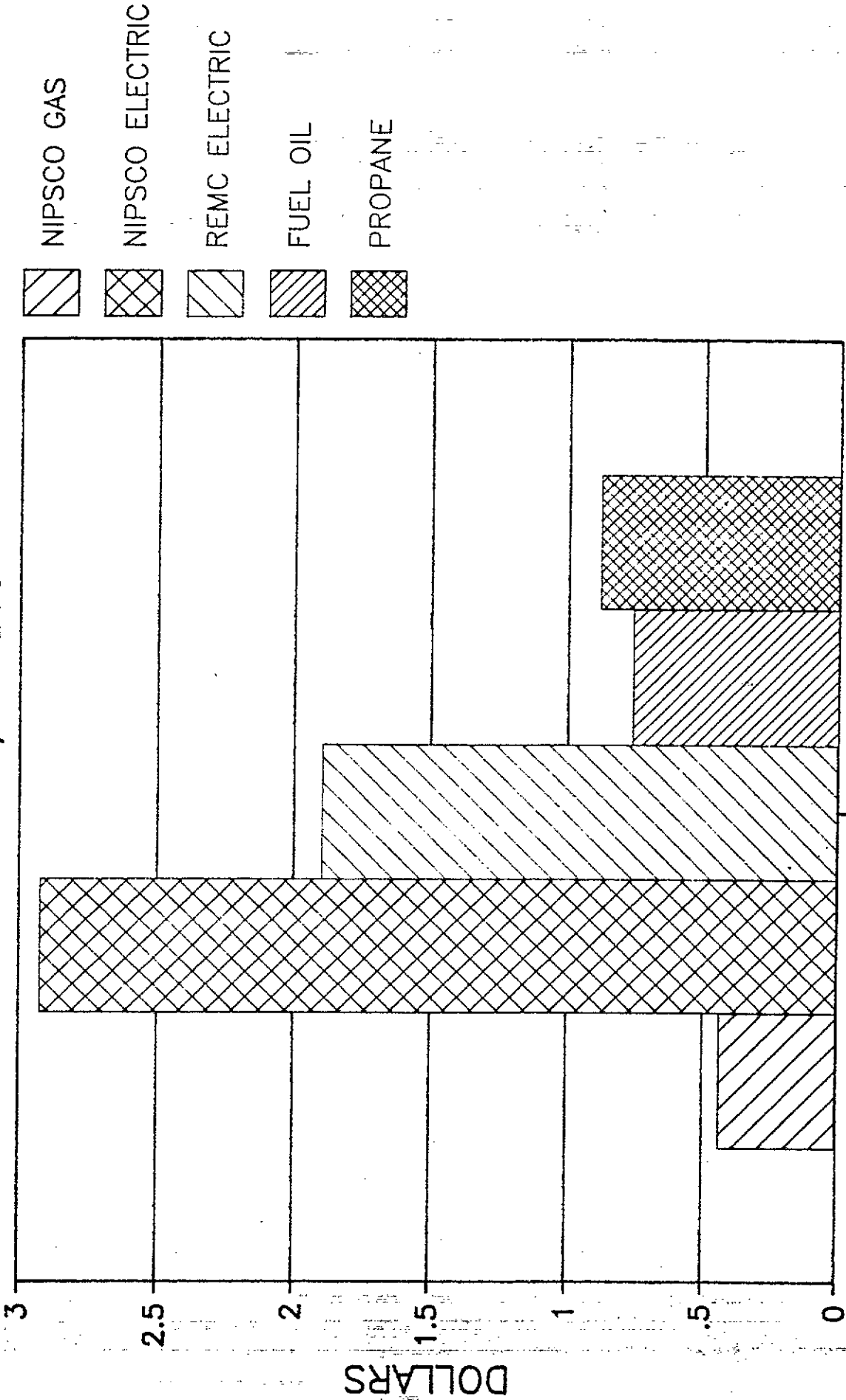
Your clothes dryer, refrigerator and freezer are also big energy users. The clothes dryer should have clean lint filters, and should only be used with full loads. The refrigerator and freezer should be kept defrosted and the coils free of dust and dirt.

BTU CONTENT



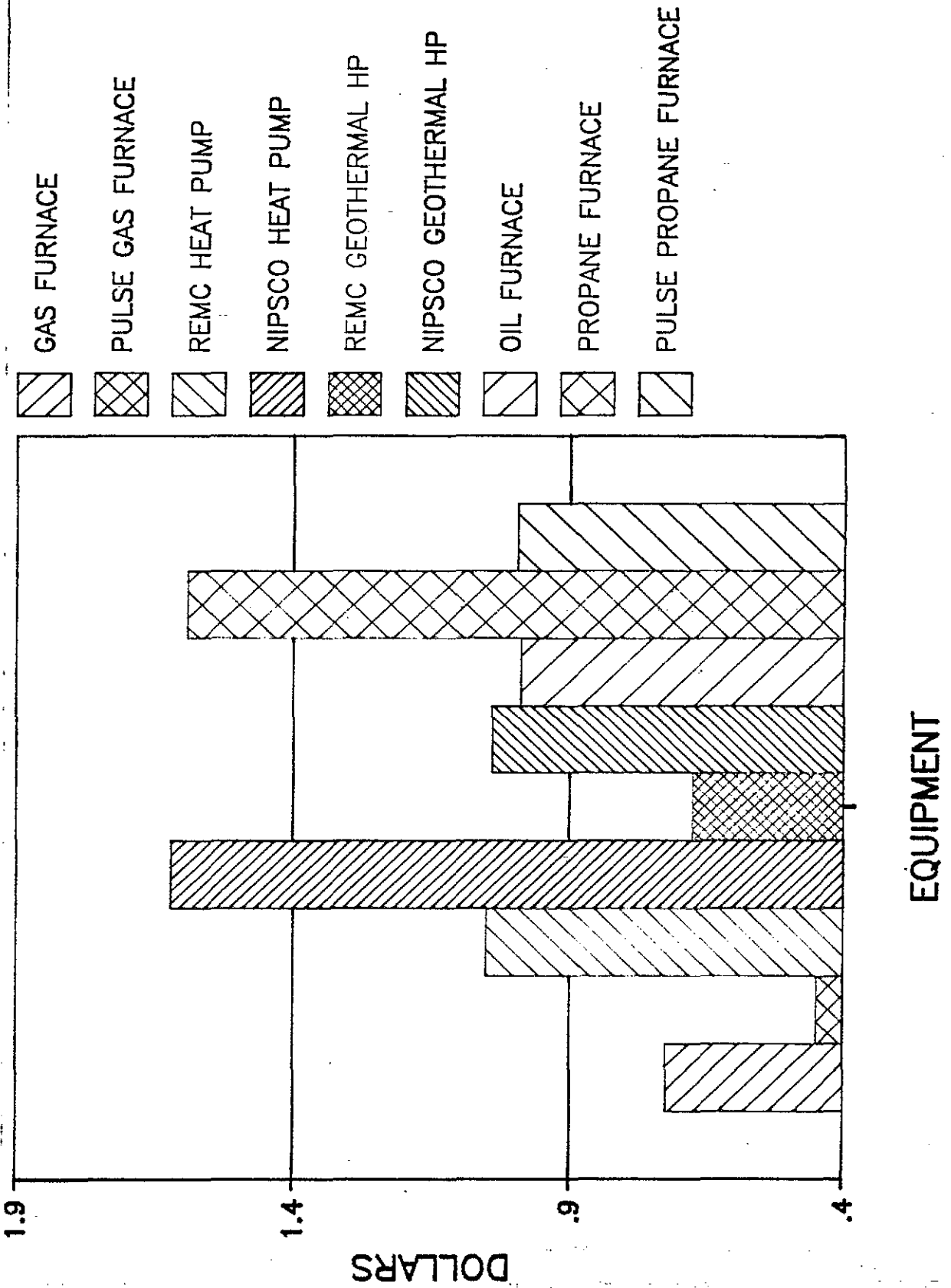
FUELS

COST PER THERM 100,000 BTU



COSTS BASED ON LOWEST MARGINAL COST ON RATE

OUTPUT COST PER THERM



The next purpose of this study is to educate the public in regards to energy assistance programs available in our community. This study will examine four such programs available for individuals who are unable to pay for the energy needed to maintain the basic qualities of life.

Project SAFE is a State of Indiana acronym for the Low Income Home Energy Assistance Program Block Grant administered by the Department of Health and Human Services. The purpose of SAFE is to assist low income households with the high cost of home energy. The program is neither intended to be an income maintenance program nor is it intended to pay all of a household's energy expenses.

Eligibility criteria for SAFE is divided into two distinct categories. First, guidelines are established for individuals age 59 and under. They are as follows:

<u>Number In Household</u>	<u>Gross Annual Income</u>
1	\$ 6,563.00
2	\$ 8,813.00
3	\$11,063.00
4	\$13,313.00
5	\$15,563.00

The second set of guidelines is for those individuals age 60 and over. Those guidelines are increased by approximately 25% over those for age 59 and under. For both groups, all income must be calculated and verified on the last 12 months prior to the date of application.

Next, the process of submitting applications, beginning in October of each year, is as follows. Applicants may complete applications with the County Director for Project SAFE. The SAFE office is located in the lower level of the County Court House. Applications are then sent to the Indiana Department of Aging and Community Assistance. Following this, applicants are then notified of approval or denial. If the application is rejected, the applicant may file an appeal. If the applicant is denied on the basis of income, he or she may reapply at a later date if their income drops below the stated guidelines.

When applicants are approved, they are eligible for the following one-time utility credits. These credits are made directly to the utility supplier.

- | | |
|-------------------------|----------|
| 1. Gas | \$275.00 |
| 2. Fuel Oil, Coal, Wood | \$265.00 |
| 3. Electricity | \$ 50.00 |

If the situation is urgent, the applicant may fill out an emergency voucher and application, provided they are eligible under SAFE guidelines. The Emergency SAFE Program provides the following for those awaiting regular SAFE approval.

1. 150 gallons of fuel oil
2. 200 gallons of propane
3. Two tons of coal
4. Four racks of wood

Emergency SAFE is a one-time disbursement beginning November 1 of each year. This program is continued until emergency funds are depleted.

On the local level, 1236 families were assisted through Project SAFE. In addition, 95 families were assisted through Emergency SAFE.

Project SAFE has benefited our community in various ways. First, it is an initial resource for those seeking utility assistance. Second, project SAFE assists members of the local community and returns Federal funds to the local economy. This is due to the fact that funding for SAFE is made available through the Federal Block Grant programs. Third, SAFE assists families by allowing them to spend earned income on other important needs such as food, shelter, and clothing. Fourth and finally, Project SAFE is easily integrated with other Federal, State, and Local programs whose purpose are to improve the basic quality of life.

With the passage of the Housing and Community Development Act Amendments of 1981, the Federal Government took the first step to transfer responsibility for administering a portion of community development activities to state governments. The resulting program in Indiana is entitled the Small Cities Community Development Block Grant Program (CDBG), which is managed by the Indiana Department of Commerce (DOC). Included in this program is the Residential Energy Management Program (REMP).

REMP is a statewide residential energy audit and controlled retrofit/education program for low and moderate income individuals residing in communities with a population of 50,000 or less. Here in our community, REMF fills a needed void in

the range of programs available to our citizens. While existing residential programs help to defer the cost of residential energy, until REMP, none addressed the energy education and weatherization needs of citizens with low to moderate income levels residing in our community.

Locally, the program is administered by Combined Community Services, located at 212 East Market Street, Warsaw. Originally, the request for the grant was applied for by the City of Warsaw with the Indiana Department of Commerce's Division of Energy Policy. The grant received was in the amount of \$100,000.00. The following is an approximation of how the funds will be distributed:

Weatherization Improvement	\$ 80,700.00
Program Audit by C.P.A.	\$ 4,400.00
Administration	<u>\$ 14,900.00</u>
TOTAL:	\$100,000.00

Currently, the community has 1,447 eligible households. This figure is based upon 80% of the median income of \$16,117.00 listed in the 1980 Census Bureau Data. Thus, an income level of \$12,893.00 is derived for eligibility requirements. The dollar value of improvements per eligible household is set at a maximum of \$300.00. Therefore, it will be possible to serve a minimum of 269 households within the period of the grant.

The Residential Energy Management Program is organized to operate in the following prescribed manner. First, all of the 1,447 eligible households will be notified of the existence of the program. This will be done through media exposure and mailings.

Second, those households that are eligible and interested, will then be given energy audits or "inspections" by a licensed REMP Energy Auditor. These audits will be an on-site inspection of the premise and will be used to determine the best cost-effective methods of improvements in relation to energy savings. The second function of the audit is to provide education to the occupant regarding lifestyle practices as they relate to the reduction of energy consumption. The function of this education is to suggest steps that are low-cost or no-cost and may provide as much as 4-14% savings on utility costs. The third aspect of the program is composed of the actual installation of weatherization improvements by a local state sanctioned contractor. Examples of the items to be installed would be weather stripping, caulking, replacing of broken window panes, etc. All of the installations will be completed within the allocated \$300.00 and are to produce low-cost, high yield savings to the occupant. Next, the fourth step of the program is a re-audit of the home in order to verify that work has been completed and it is of acceptable quality. During this reinspection, the occupant is requested to sign a release form for their energy bills so that improvements in energy consumption may be monitored and compared with previous consumption rates. In this manner, the program may verify and record the yields and value of such a program to our community.

Currently, the foreseen benefits to our community will be as follows:

1. The program will help to educate individuals as to specific no-cost measures they may institute themselves.
2. When used in conjunction with other energy assistance programs, REMP will aid in decreasing energy loss and consumption, thus decreasing the dollar amount needed per household. This will serve to stretch the funding for other programs and will in turn increase the number of individuals those programs may reach.
3. The REMP program will help to increase the quality of living of those individuals it serves. This may be accomplished by freeing those dollars previously spent on energy to be used for items that are of a more necessary nature in regards to leading a quality lifestyle.
4. This program will also be of benefit to some elderly individuals and households who may have a one parent female head. For those individuals who lack the expertise, technical experience or the physical ability to affect improvements on their dwelling the program the individuals will have the ability to have these improvements completed by a professional.
5. Additionally, the REMP program will be of benefit to the community as a whole in that it will bring \$100,000.00 of funding into the local economy.
6. Finally, the program will benefit the community in future periods. Grants are available on a yearly basis and may be reapplied for on such a basis. Therefore, on an ongoing basis, these other benefits will continue to be available to our community in the future.

In summary, the Residential Energy Management Program will fill a needed void in programs currently available in our community. By providing energy education as well as low cost weatherization, our community will add another compliment to its already extensive social service programs. The REMP Program will benefit the community by enabling existing programs on energy by other social service organizations to be stretched to maximum potential. It will guarantee that other dollars being allocated for energy assistance will be utilized in the best possible manner.

In addition to Project SAFE, individuals may seek energy assistance with their respective township trustees. Qualification for assistance is dependant upon gross monthly income and the number of persons residing in the dwelling. Additionally, individuals must be housed in a "shelter". A "shelter" is defined as a rented dwelling or one where the applicant is paying a partial mortgage payment. Examples of the guidelines are as follows:

<u>Persons in Household</u>	<u>Gross Monthly Income</u>
1	\$342.00
2	\$383.00
3	\$422.00
4	\$520.00
5	\$587.00

* Examples are based upon Wayne Township.

"These are the basic guidelines", stated Ed Pratt the Wayne Township Trustee. "People are dealt with on a one-to-one basis and these guidelines are flexible and based upon needs, urgency, and the judgement of each trustee." In addition, funds are not allocated directly to the applicant; rather, claims are issued to the provider. In this manner, funds are guaranteed to be utilized in the fashion for which they were intended.

Each Township has its respective budget. An example of this, Wayne Township, is as follows. "The total budget for 1985 was approximately \$565,000.00 of which \$45,000.00 was allocated directly to energy assistance", as stated by Mr. Pratt. "Additionally, in February of 1986 alone, \$2877.00 was spent to assist qualified applicants in paying energy costs." Of this \$565,000.00 budget, \$65,000.00 is provided through Federal revenue sharing with the balance obtained through local taxation. This local taxation is based upon a tax levy on real and personal property in the confines of the township. One interesting note is that Wayne Township is a 6 mile square area, yet it contributes one-third of all taxes levied within Kosciusko County. All township budgets are accountable to and approved by the Indiana State Board of Accounts. Ultimately, funds are disbursed by the County Auditor. It should be noted that, except for the state of Nebraska, the Township Trustee System is unique to the State of Indiana.

This program is beneficial to the community in several ways. One, it serves to assist those individuals who may not be able to qualify for other assistance or for those who have exhausted

other means such as Project SAFE. Two, this assistance is approved at a local level and therefore expedites funding in situations that require immediate attention. Three, funding may be tailored to individual extenuating circumstances, based upon the judgement of the trustee. Therefore, it provides greater flexibility over other programs with more stringent guidelines. Fourth, the program may be integrated with other forms of assistance with positive results. For example, if those individuals applying for assistance would utilize the aforementioned Residential Energy Management Program, funds disbursed by the trustee could be reduced per applicant due to increased energy efficiency. Therefore, funding would be liberated and capable of reaching a greater number of applicants. Finally, the fourth energy assistance program is the Community Energy Assistance Program for Kosciusko County. This program is sponsored by the United Way of Kosciusko County, Inc. in response to Northern Indiana Public Service Company's (NIPSCO) pledge to provide matching funds to assist qualifying individuals in maintaining their service from NIPSCO throughout the heating season.

In order to apply for assistance through this program, the applicant must have exhausted all other sources of tax-supported programs. This would include Project SAFE, Emergency SAFE and assistance from the respective township trustees. Applications may be obtained at the Combined Community Services office located at 212 East Market Street, Warsaw. To apply, an applicant must furnish the following information:

1. Disconnect notice or regular unpaid statement from NIPSCO.
2. Proof of income for all working members of the household.
3. Identification and current address.

An applicant must have been a resident in Kosciusko County for 1 year and college students are ineligible. In addition, an applicant must show proof of employment in the county for the past year, provided they are not disabled. Only NIPSCO customers are eligible due to the fact that only NIPSCO matches the funding from United Way and individual donations. Moreover, the applicant must qualify within the guidelines established by Project SAFE. Applicants will then be reviewed by United Way volunteers and will be approved or disapproved. Furthermore, applicants will be notified of the disposition within one week after submitting the application. First considerations will be given to the newly unemployed and elderly applicants.

Upon approval, the matching energy credits may be applied toward two separate assistance needs. Credit may be issued for an outstanding or past due bill or on a portion of the utility bill upon which an agreement is made with NIPSCO to restore or maintain service.

During the 1985-1986 heating season, the Community Energy Assistance Program served a total of 212 households. These households consisted of a total of 750 individuals, of which 181 were unemployed and 11 were elderly individuals. The total amount of funds disbursed was \$26,500.00. United Way funds, as well as private donations, were matched by NIPSCO.

The Community Energy Assistance Program, as with other previously noted programs, offers a number of substantial benefits to our community. First, this program gives priority to the elderly and newly unemployed individuals in our community. Second, it serves to reduce the amount of tax dollars spent on energy assistance due to the fact that it is funded entirely in equal amounts by the United Way, NIPSCO, and private donations. Third, this form of assistance provides a "last resort" for those people who have no other assistance alternatives. Fourth, similar to the trustee program, this program is implemented and administered on a local level and it too, expedites funding in situations that require immediate attention.

To conclude, energy, its consumption and costs affects all individuals on a daily basis. As consumers, we must be aware of our usage practices in order to reduce the amount of energy we waste. We are all aware of tips we could institute to cut our consumption, yet how many of us put these saving measures into action?

By comparing current energy costs with those of other sources, individuals may make informed decisions as to changing primary energy sources. The benefits must be carefully weighed in relation to individual situations. For example, the replacement of older appliances with newer, more efficient equipment should be carefully thought out. The energy savings payback is much greater than the original cost of the equipment and installation. However, not all individuals may be willing

or able to make such an investment. In this situation, there would still be many low-cost or no-cost solutions that individuals may institute to cut energy costs. For example, wrapping heating ducts, changing furnace filters, turning off of the furnace pilot light in the non-heating season may be some solutions. These are but a few of the steps we can take to reduce energy costs.

On the other hand, what of the unfortunate individuals who may not have the funds to even maintain energy service? In summary, in our community these individuals may seek assistance through social programs such as the Township Trustee Program, Project SAFE, or The Community Energy Assistance Program. In addition, they may qualify to have their dwellings weatherized to prevent energy loss under the Residential Energy Management Program. These programs help to guarantee that impoverished individuals have the basic right to a suitable shelter during our long winters.

Again, the consumption and cost of energy is common among all men in our modern world today. Without the availability of energy to fuel our society, we would literally be faced with insurmountable problems. In summary, we must educate, we must seek to conserve energy and put the amount we use to the best possible use. By wise energy usage we can insure it's availability at a reasonable cost for future generations to come.