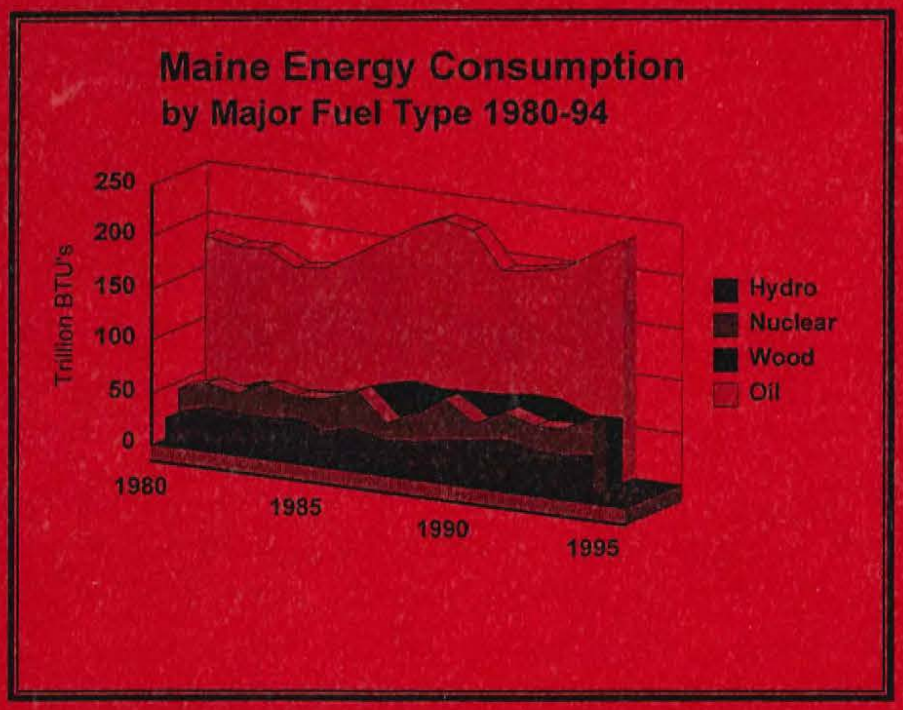
THE 1998 MAINE ENERGY DATA BOOK

Contains Comprehensive Energy Consumption and Price Data and Trends - 1960 through 1995



Prepared by the Energy Team of the
Maine State Planning Office
Under the Direction of Evan D. Richert
May 1998

Maine State Planning Office, May 1998

1998 Maine Energy Data Book

-Energy Use and Price Trends - 1960 through 1994/95
-Comprehensive Energy Consumption and Price Data
-Inventory of 1994 Electric Capacity and Generation

Maine State Planning Office
May 1998

Evan D. Richert, Director

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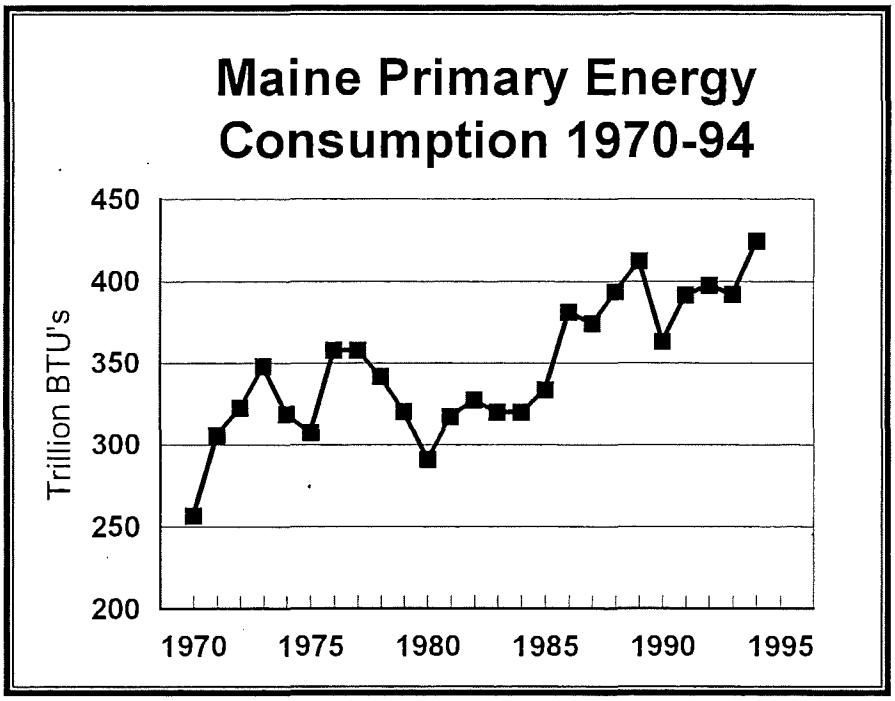
I. Overview-- Maine Energy Trends: 1970-1994/95

Maine's energy consumption has long been driven by economic activity and oil prices. As the cover graph illustrates, oil has dominated the energy landscape in our state for quite some time, and while great strides have been made to diversify our energy mix over the past 3 decades, we are still highly dependent on petroleum products. Figure 1 shows that Maine's consumption of primary energy (which would include energy used for the production of electricity and for transportation as well as for residential, commercial and industrial purposes) grew rapidly in the early 70s and again in the late 80s. The oil price shocks of the mid and late 70s that sent both Maine and the nation into recession led to significant drops in consumption. As oil prices subsided through the eighties and the national economy flourished, energy demand in Maine grew rapidly. By 1989, Maine was using more energy than ever before in its history. Primary energy consumption grew by over 37 percent during the eighties, with the most significant increases occurring in the transportation sector.

Figure 1

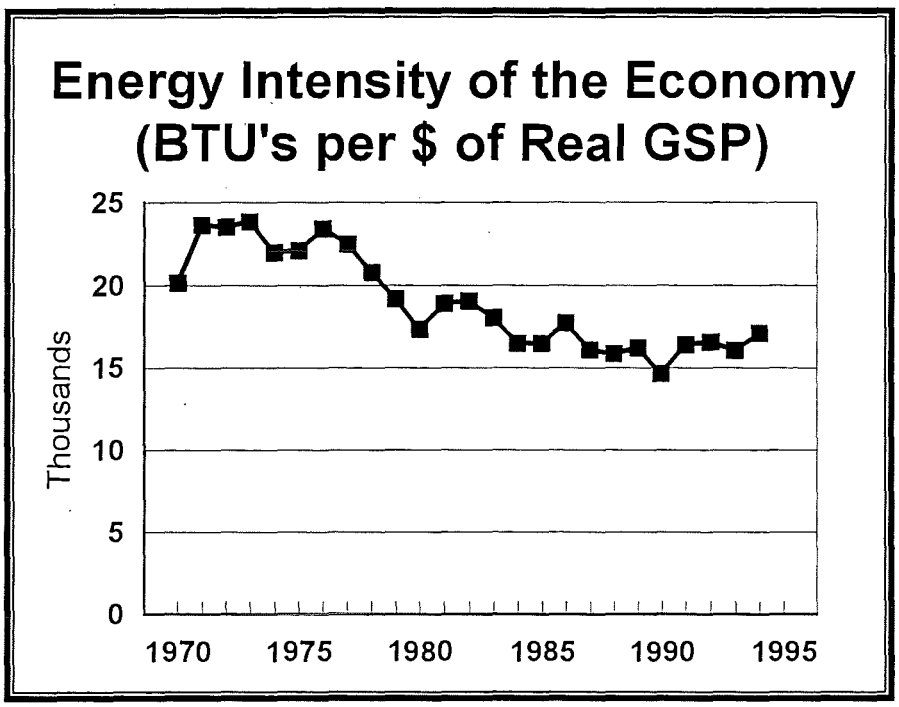


When the state and region entered a protracted recession in 1990, energy consumption dropped and the demand for energy did not surpass the 89 peak until 1994 as the economy struggled to regain its footing. Problems at Maine Yankee, the state's only nuclear facility, caused 1995's primary energy consumption to fall dramatically and eventually led to this plant's closure in 1997.

Energy Efficiency

While Maine's overall energy consumption has generally grown through the past 25 years, the state has also become more energy efficient, continuing a trend which began in 1971. Statewide energy efficiency is measured in terms of the energy intensity of the economy and is determined by computing the amount of energy used in each year relative to the State's economic output (in 1992 real dollars) or Gross State Product (GSP) for that year (see Figure 2). Energy use fell from over 24,000 Btus per dollar of GSP in 1972 to 17,000 Btus per real dollar of GSP in 1994. In other words, it currently takes one-quarter less energy to produce a dollar of GSP than it did 22 years ago. Likewise, it takes less energy today to supply the needs of over 470,000 homes than it did in 1969 to fuel 300,000 homes. So, even though primary energy consumption increased, the State's total energy bill, adjusted for inflation, declined over the course of the eighties.

Figure 2

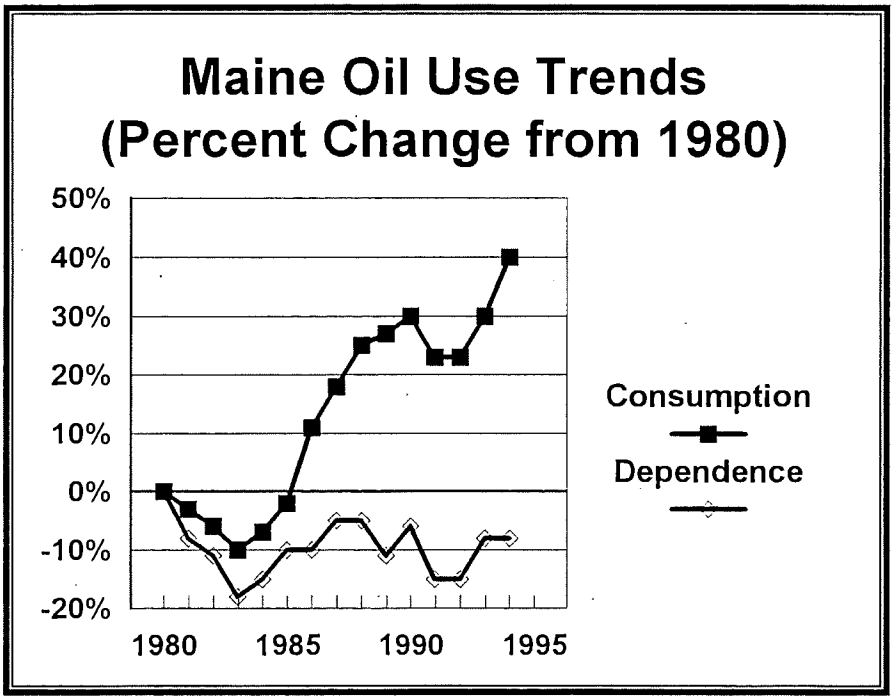


Because they are market driven, oil prices are unpredictable. During the heating season in the years 1996-97, the Maine and New England oil market experienced a change in the behavior of oil dealers which caused a backwardated market and high prices. Dealers were no longer holding inventories of distillate products but instead relied on *just-in-time inventories* which translated into less predictable and lower supply volumes and therefore higher prices in response to demand. If price volatility were to result in a long-term upturn in energy prices, it would have serious implications for the Maine market economy which is dependent on oil products for home heating and transportation. The most effective way to manage this risk continues to be through increased efficiency and the continued development of alternative energy resources.

Renewables / Dependence on Oil

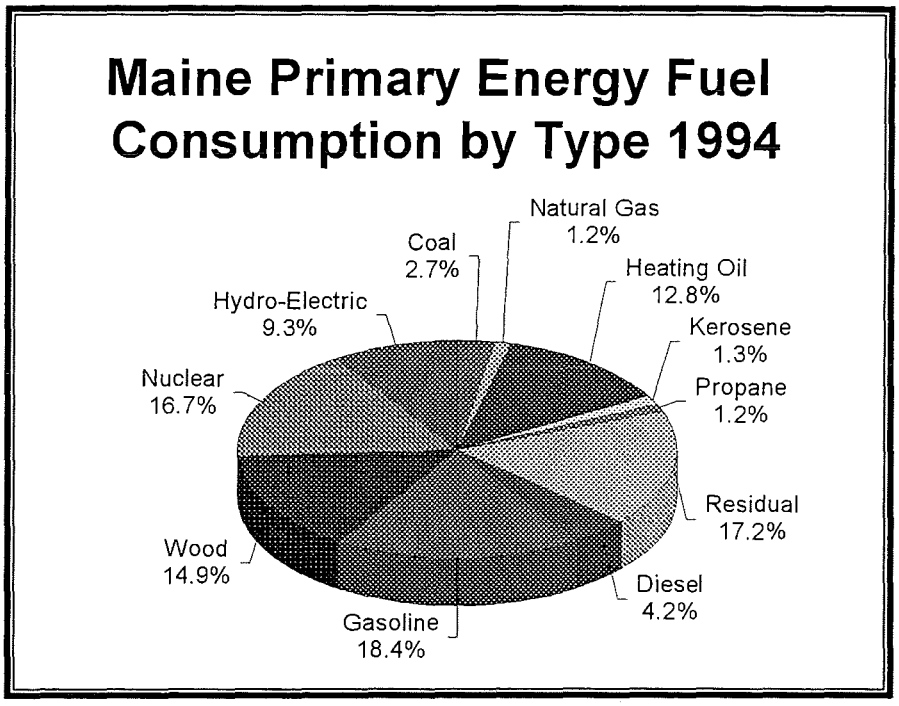
Maine has been a national leader in the development of renewable energy. In the early nineties, indigenous hydro and wood resources have supplied over 25 percent of Maine's primary energy needs and were used to produce nearly 50 percent of Maine's electric power. Both consumption of oil and use of renewable energy grew dramatically during the 1980's. Total oil consumption in Maine increased by almost 30 percent during that decade primarily due to the increased use of gasoline and diesel fuel for transportation. Simultaneously, Maine's use of renewable hydropower and biomass increased by almost 58 percent. Thus, while overall oil use grew during the eighties and into the mid-nineties, Maine's relative dependence on oil declined slightly, due, in part, to the development of renewable alternatives.

Figure 3



Maine's energy profile is unique relative to the national average. While coal and natural gas dominate the rest of the country's energy supply profile, they have played a minimal role in Maine's energy mix. As one can observe in Figure 4, which shows Maine Primary Energy Consumption by Major Fuel Type for 1994, neither have been available in large enough quantities to create a market. During the 1960s and the 1970s, this deficit in coal and natural gas fuels caused Maine to be over 70 percent dependent on oil. As was mentioned earlier, during the 1980s, the development of renewable resources combined with the introduction of nuclear power from Maine Yankee in 1972, together reduced Maine's oil dependence to near 50 percent.

Figure 4



During the 1990s, Maine again experienced an upswell in its use of oil which increased to 59% of our primary fuel consumption. Driven by a drop in the real price of oil, heating oil has really gained in its share of the pie while nuclear and wood were fairly constant in their contribution from 1989 through 1994. Hydro as a percent of the total diminished since over that 5-year period.

As Section IV explains in some detail, a great deal has happened in Maine since 1994, the most recent year for which comprehensive data are available. With the operational problems at Maine Yankee Nuclear Power Plant in 1995 which eventually led to a decision to close and decommission the facility, close to 20% of our energy supply has disappeared, completely altering our energy mix and dramatically increasing our dependence on oil. Although the construction of numerous natural gas fired facilities has been announced in recent months, until the time that these plants are built and operational, Maine's oil dependency will again be in the vicinity of 75%.

As Figure 5 illustrates, petroleum products supplied three-quarters of all the end-use energy used in Maine in 1994, led by gasoline (24.4 percent), heating oil (16.9 percent), and residual oil (19.8 percent). Although electricity accounts for only 12.2 percent of the end-use energy consumed within Maine, it represents the single largest component of the State's energy bill (see Figure 6). This is because electricity has a much higher cost per btu of delivered energy. Forty-three percent of Maine's total 1994 energy bill was spent on electricity. This is close to

half the pie shown in Figure 7 and represents an increase of almost 10 percent since 1990. Gasoline accounts for 25.6 percent of the state's total energy bill and heating oil is nearly 14 percent of the pie.

Figure 5

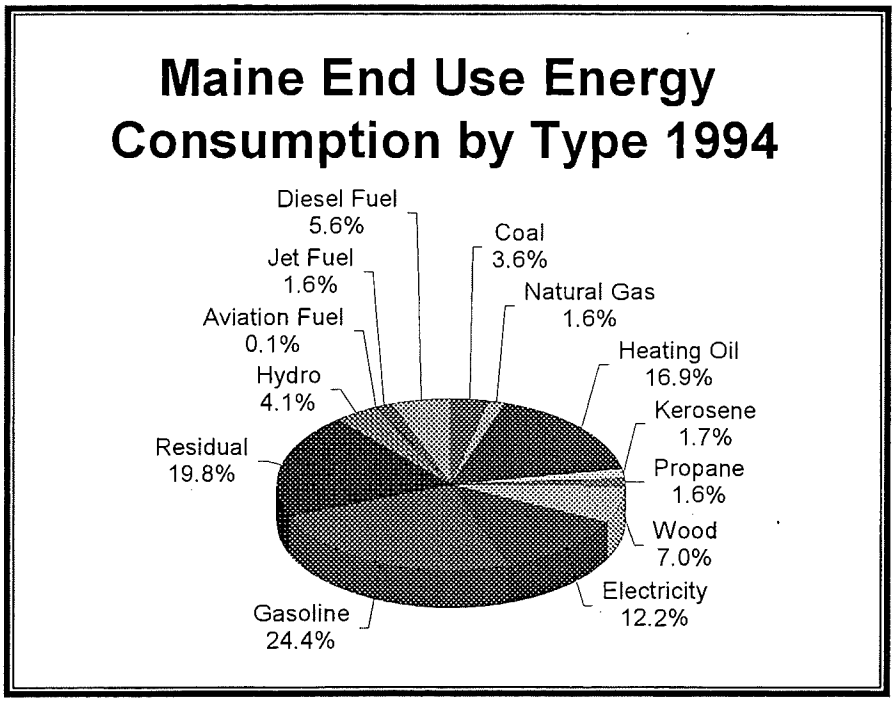
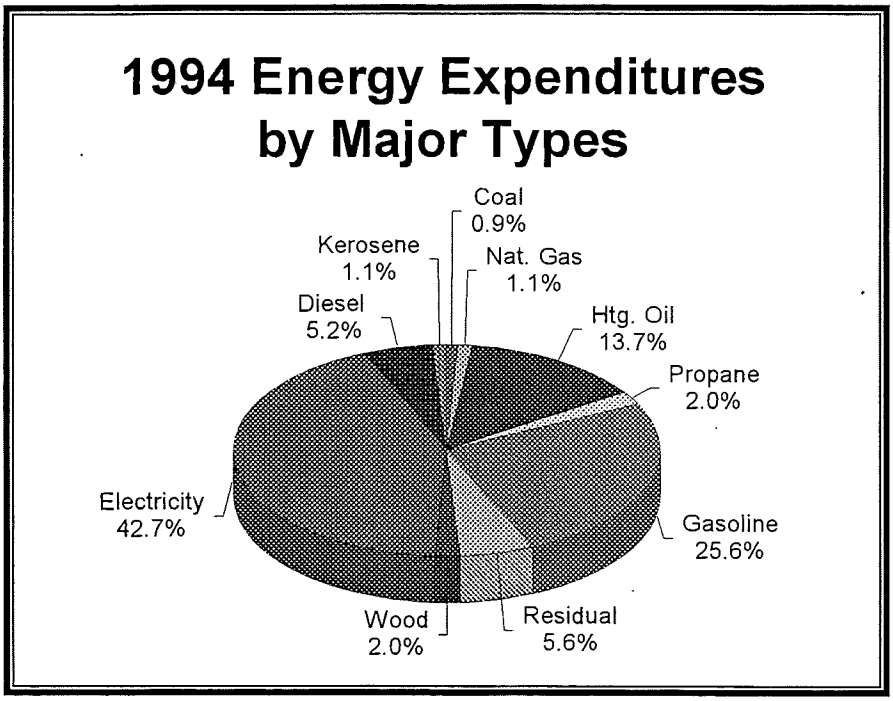
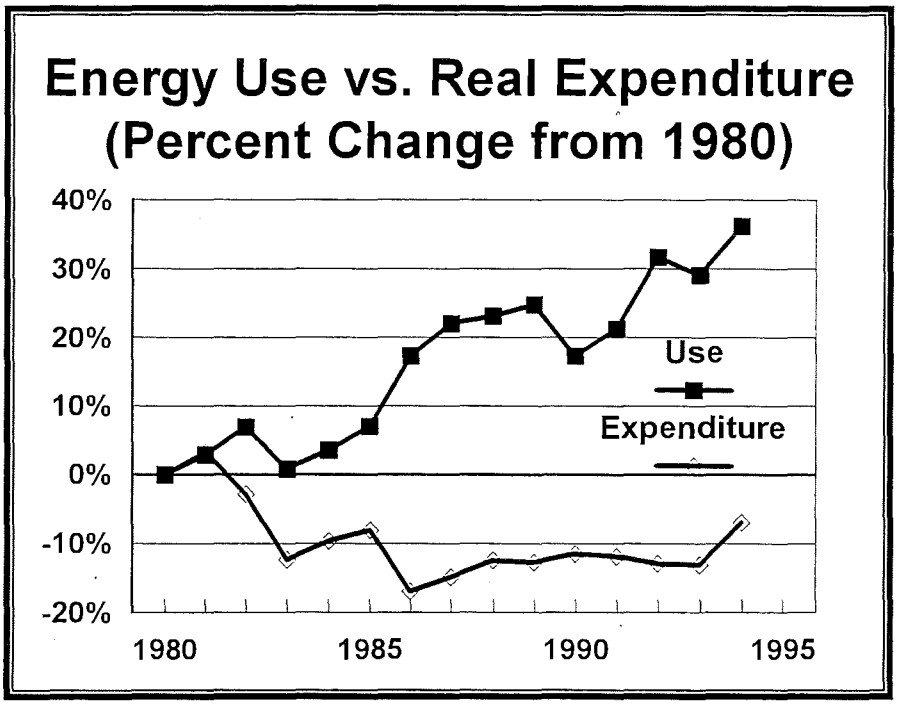


Figure 6



Mainer's spent $2.72 billion on energy in 1994, primarily for combustible oil fuels and electricity. Figure 7 highlights that while energy use has grown over the past decade and a half, real expenditures have actually declined. Increased energy efficiency and falling oil prices have led to an overall reduction in Maine's total energy bill.

Figure 7



II. Energy Used In The Production Of Electricity

The increase in renewable energy in Maine during the 1980s resulted largely from the availability of PURPA benefits and a period of rapid growth in demand for electricity. An unprecedented increase in non-utility electricity generation at privately-owned, independent hydropower, wood-fired cogeneration and municipally-owned waste-to-energy plants generated a market for alternative energy at rates which were not based on the cost of production but on the *avoided cost* which was indexed to the rising costs of oil and nuclear power. The attractive early 1980s sales contracts with the utilities for these qualifying PURPA facilities were an incentive for and stimulated the rapid development of alternative energy projects. The use of wood grew by almost 150 percent in that period. From 1970-1989, hydroelectric production grew in Maine by 115 percent and since 1979, indigenous hydropower supplies have increased by 182 MW of installed capacity. At the end of the eighties over 30 percent of Maine's electric power was being provided by independent power producers.

However, low oil prices, correspondingly low-avoided cost rates, a glut of power and changes in the Federal Power Act during the late 1980s made many Non-Utility Generator (NUGS) projects uneconomic in the 1990's marketplace. Instead of steadily increasing, as predicted, the demand for electricity flattened and the price of oil actually declined in real-dollar terms. Faced with the need to control costs, Maine's utilities engaged in an aggressive campaign to *buy-back* some of the expensive power sales contracts of the 1980's. In the *buy-back* process, the utility paid a premium to a project owner to *buy-back* and terminate the previously negotiated contract resulting in higher short-term cost to the utilities but a lower cost to the utilities and consumers over the life span of the terminated contracts. In Maine, power sales contracts for at least a dozen active hydro projects were terminated and the contracts for many other hydro projects will expire on their own over the next few years.

Maine's Electric Power Mix

The growth in renewable energy during the 1980's in Maine was most prominent in the electric power sector in large part due to the availability of power sales contracts and attractive utility rates. In 1994, over 46% percent of the capacity (Figure 8) installed to supply Maine's electric power was contingent upon the renewable resources of MSW (municipal solid waste), hydropower and biomass and these resources supplied almost 50 percent of the electric energy (Figure 9) sold within Maine in 1994. Conversely oil, represents 30 percent of Maine's *capacity* mix, but was used to supply only 4.6 percent of the State's actual electric power in 1994. Biomass and nuclear power were in close contention for offering the most capacity. However, nuclear power from Maine Yankee and other New England nuclear stations, supplied the most electrons in 1994 by providing 33 percent of the mix, followed by biomass at 27 percent, hydro at 19.3 percent and Canadian imports at 12.7 percent. Maine's waste-to-energy facilities provided an additional 3 percent of the State's electric power in that year.

Figure 8

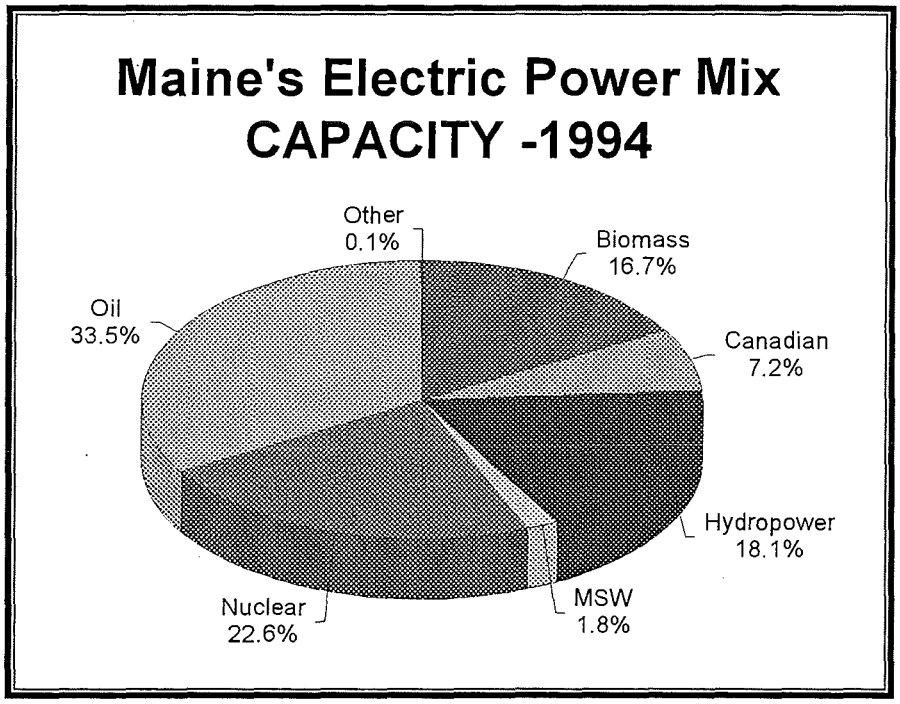
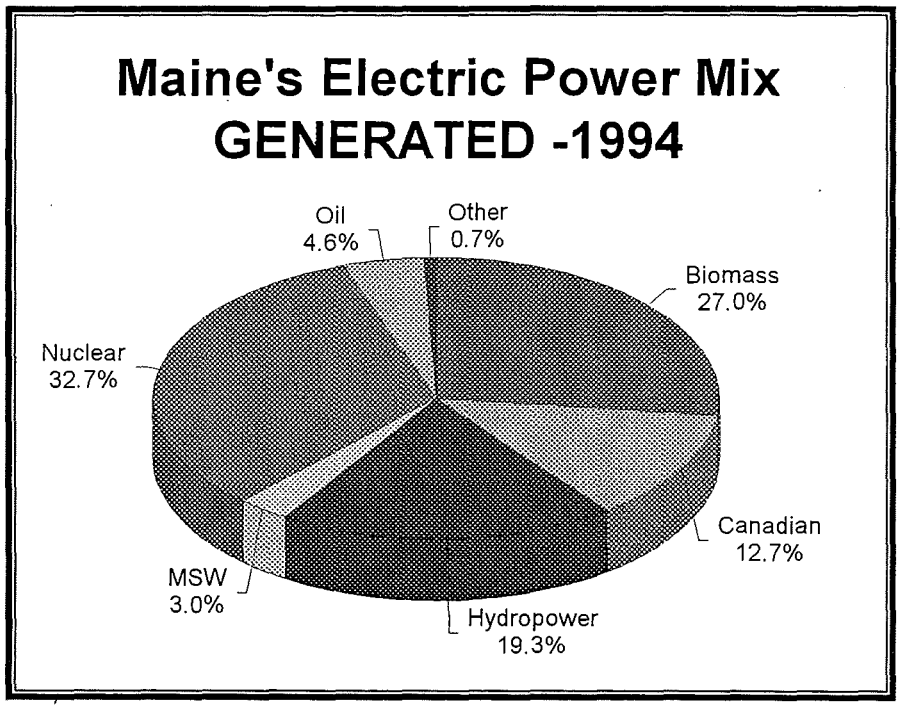


Figure 8 shows Maine's electric power mix on a capacity basis. This represents the installed capacity of the infrastructure used to supply the State's electric power needs. Figure 9 shows how these facilities were used to supply the electric power used in Maine in 1994. In other words, Figure 9 represents the fuel mix used to produce the average kilowatt-hour sold during the year.

Figure 9



III. Energy Use By Sector

A. Transportation Energy Trends

Figure 10 demonstrates the relationship between growth in population, registered vehicles, fuel use, and vehicle miles traveled in Maine, on a percentage basis, during the period 1983 through 1995. Total gasoline and diesel use grew by over 30 percent during the eighties, following an increase in total vehicle miles traveled of almost 40 percent. Part of the story behind the increased use of transportation fuels in Maine is that, beginning in 1982, falling real gasoline prices stimulated a steady increase in consumption. As we entered the nineties, Maine's vehicle miles traveled continued to rise but total fuel use declined due to the use of more efficient cars. Current trends, however, again show fuel use increasing in tandem with the miles traveled.

Over the last decade and a half, growth in the number of registered vehicles dramatically outpaced the population growth, as the number of vehicles in Maine's fleet increased by 37 percent while Maine's population increased by less than 10 percent. This fact reflects both a trend towards higher ownership of cars per household as well as a significant increase in the use of trucks for moving freight. From 1982 through 1996, the use of trucks for freight movement increased from 65% to 87%, due in large part to the deregulation of the trucking industry.

Figure 10

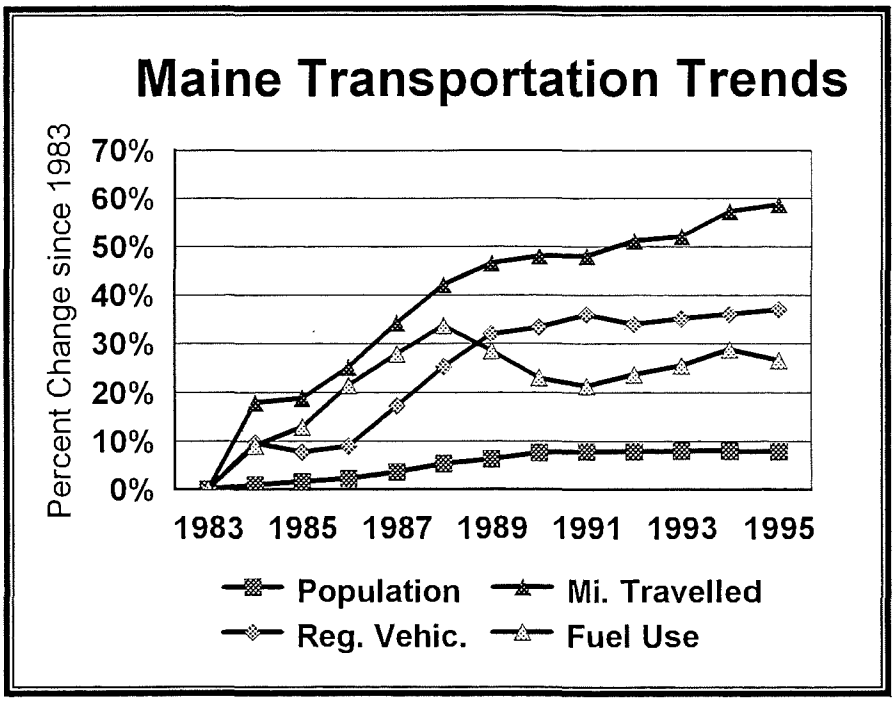
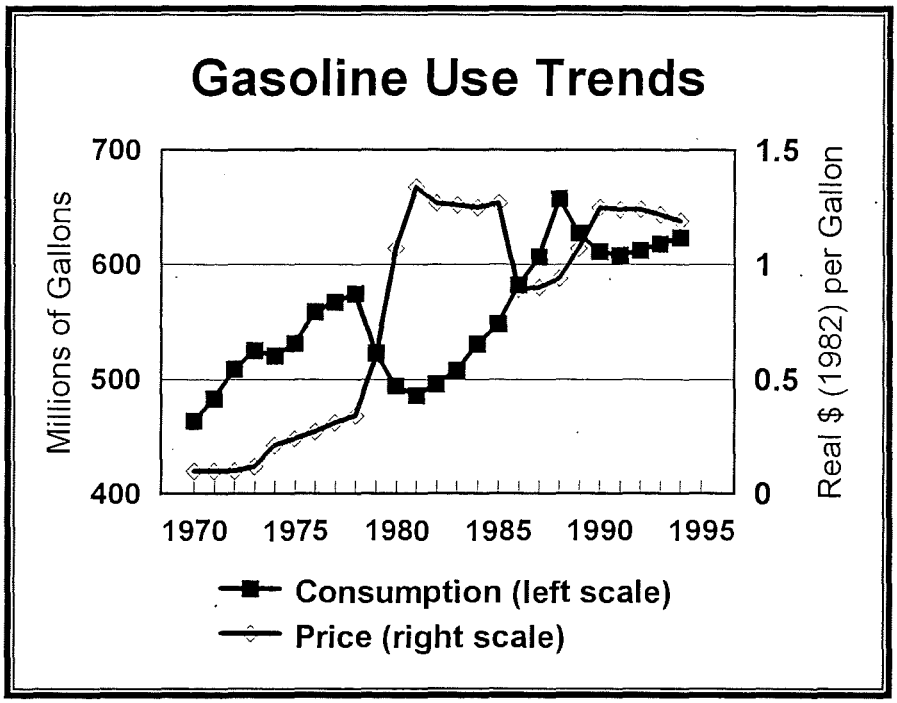


Figure 11 shows the relationship between Maine gasoline prices and consumption during the period 1970 through 1994. The price trend is depicted in constant (1982) dollars. The graph clearly indicates that price-motivated conservation has been the trend in Maine throughout the late-seventies and eighties, although a price increase of over 64 percent led to a decrease in consumption of only 15 percent between 1978 and 1982. In contrast, a 71 percent increase in the real price of home heating oil led to a 45 percent decline in consumption during the same period. This indicates that, while consumption does respond to price, it does so much more readily where alternatives are available. While firewood was available to offset residential oil use, consumers had few options to use in reaction to higher gasoline prices other than reducing their driving.

Figure 11



Electric cars are likely to be a part of our energy future if improvements in batteries are achieved to allow expansion of the travel range up to 150 miles. During the 1990's Maine has had an active state program housed at the Department of Environmental Protection to promote alternative vehicles and transportation fuels and to educate the public about the opportunities for use of clean-burning alternative fuels.

Clean Cities is a national effort coordinated by the USDOE to increase the use of alternative fuels in the transportation sector. The Greater Portland Clean Cities program is a voluntary effort patterned after this national program which provides a forum for effective collaboration among stakeholders in both the private and the public sector. Impetus for the Greater Portland Clean Cities program came from a 1996 forum convened by Governor Angus King in Portland and gave focus to the effort to increase the use of alternative fuels and vehicles. A steering committee of stakeholders was established to study and pursue establishing a

program in Maine. This group developed and advanced an incentives package in the Maine Legislature to promote clean fuels and vehicles. *An Act to Encourage the Use of Motor Vehicles that Use Alternative Sources of Fuels for the Purpose of Reducing Air Pollution*, which passed in 1997 and was signed into law by the Governor, establishes a clean fuel vehicle loan and loan guarantee program through the Finance Authority of Maine. It also ensures sales tax fairness to purchasers of clean fuel vehicles, creates a motor vehicle emissions labeling program and allows insurance incentives to encourage policyholders to use clean vehicles. This group also secured USDOE grant funding for a clean fuels conversion pilot project and companion public education effort. These are significant efforts towards the management of risk in Maine's oil dependent economy.

B. Residential Energy Use Trends

Maine's residential sector became significantly more energy efficient during the past two decades. Between 1970 and 1989, per household energy use fell by 38 percent, caused primarily by weatherization efforts, replacement of inefficient heating systems in older homes and growth in newer, energy efficient homes. Per-household oil use fell by almost 50 percent over the two decades, although per-household electricity use increased by almost 50 percent. Residential wood use increased dramatically during the late 1970's and early 1980's but declined in the late eighties as oil prices recovered from earlier price shocks. The nineties have witnessed a stabilization in residential energy use. Figure 12 shows the trend in total energy use per household, including firewood, cooking and heating fuels (propane, kerosene, No. 2 heating oil etc...) but excluding transportation energy.

Figure 12

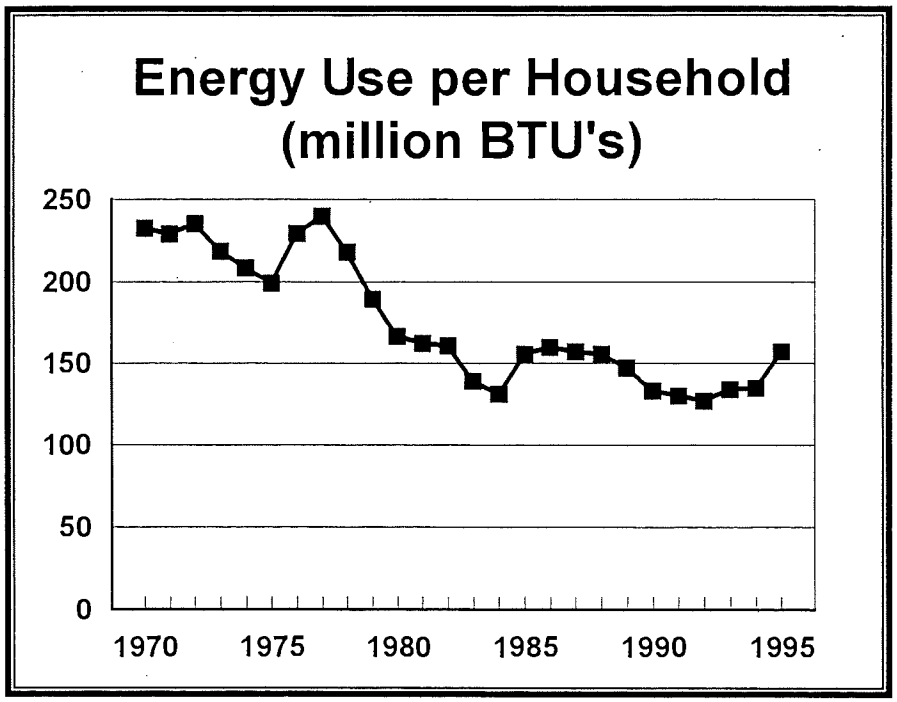
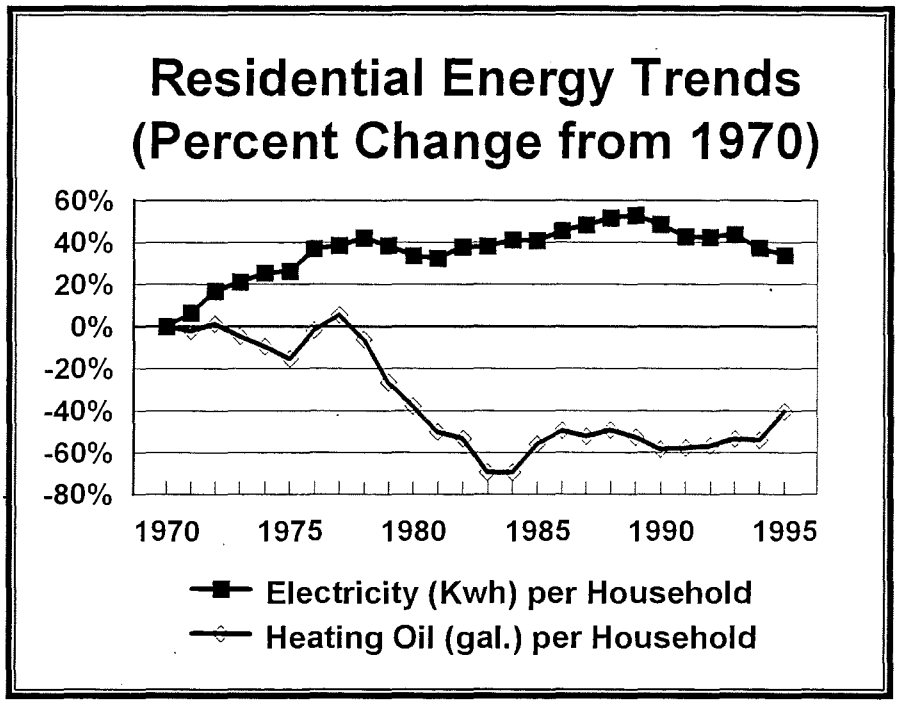


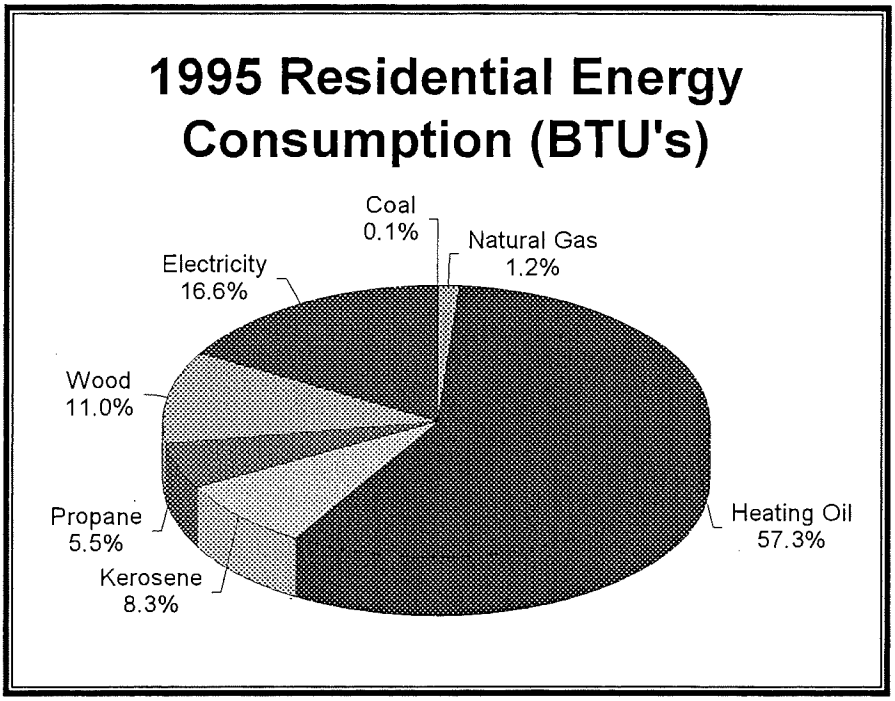
Figure 13 shows the trends for per household electricity and heating oil use on a percentage change basis. The growth in electricity consumption follows the national trend toward the increased "electrification" of our end-use energy mix. Although appliances and other electrically operated devices are becoming more energy efficient, more people are using more kinds of electrical equipment in their daily lives. Also, while consumers frequently upgrade to more energy-efficient appliances, they often choose larger models with more features that offset the gain in relative efficiency.

Figure 13



As shown in Figure 14, in 1994 heating oil led residential energy usage on a btu basis at 51.6 percent, followed by electricity (19.8 percent) and firewood (14.6 percent). Propane, kerosene, natural gas and coal play a relatively small role in Maine's residential energy mix, although residential propane usage grew by over 140 percent during the 1980's. Natural gas is expected to play a much bigger role in all sectors as the century turns due to the coming of the natural gas pipeline.

Figure 14



C. Commercial and Industrial

In 1995 the commercial sector of the Maine economy used nearly 30 trillion BTUs of various energy sources to power businesses, institutions, schools, hospitals, and office buildings. The principle sources of energy used in the commercial sector are heating oil and electricity. In addition significant use of natural gas and residual oil, these four sources accounting for over 94% of the energy consumed.

Energy trends in the commercial sector fluctuate with trends in the general economy. Energy use planed off in 1990 and 1991 during the last recessionary cycle, then rebounded to highest levels ever through 1994 as the economy rebounded. The percentage of natural gas use has increased modestly throughout this period, suggesting a larger future role in the energy mix.

In 1994 the industrial sector used 124.6 trillion BTUs of energy to power manufacturing plants, assembly and fabrication shops, and the pulp and paper industry. The single largest energy source is residual oil used to fuel boilers to produce steam and electricity to power large paper making operations. In addition self generation of electricity from on-site hydro and wood power plants contributes another 21% to the energy mix. Unique in Maine's energy picture is the use of coal in the industrial sector. Other than a very small amount of residential use, coal is not a significant part of the energy supply. Purchased electricity from utilities, heating oil, and natural gas complete 98% of the energy mix.

Figure 15

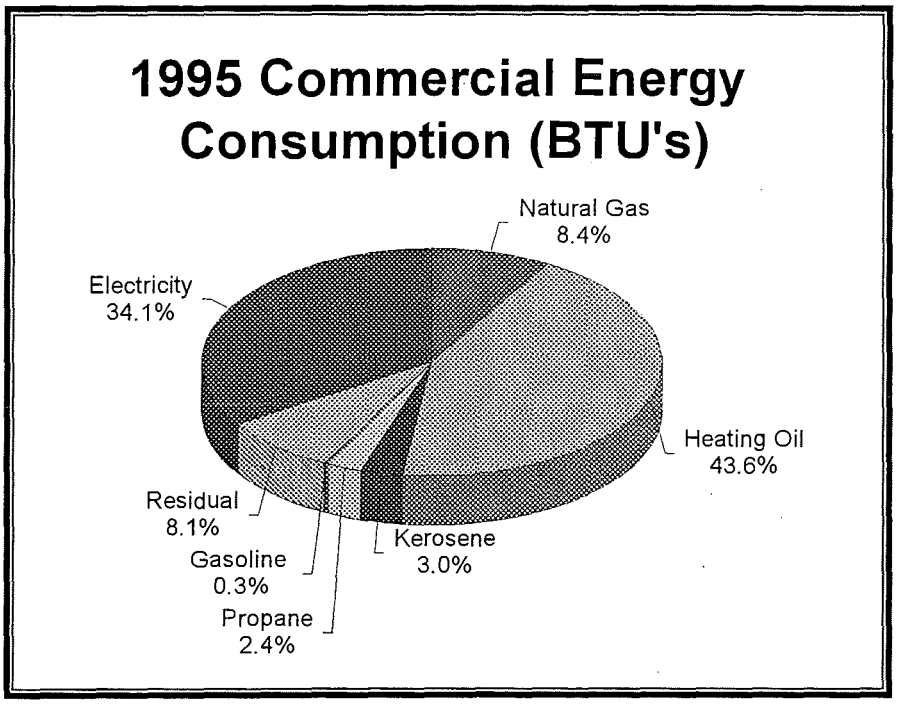
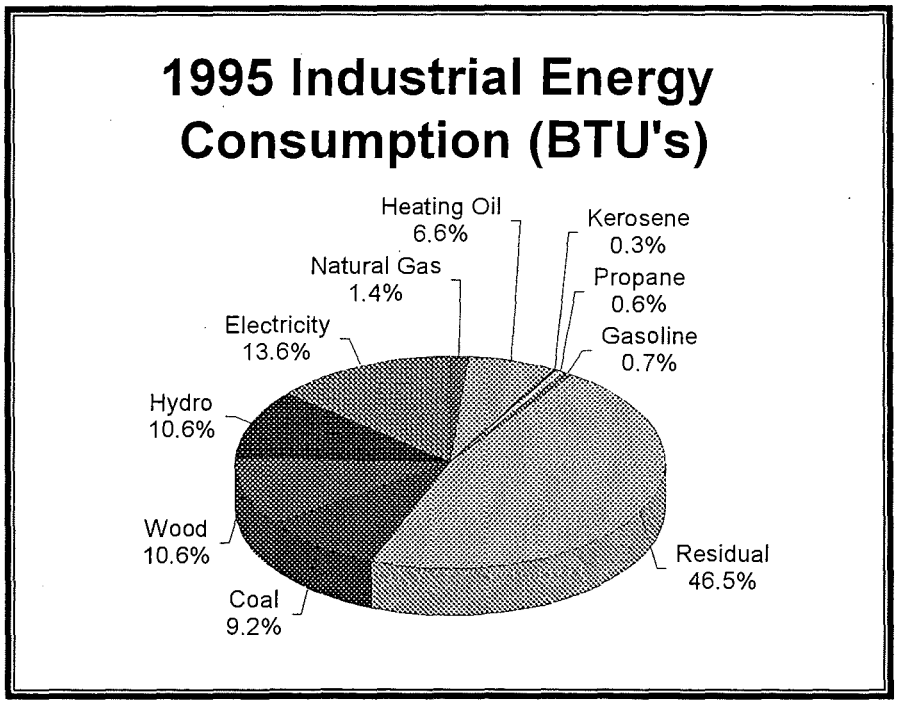


Figure 16



IV. Changes Since 1994 Which Affect Maine's Energy Future

A. Utility Restructuring

During the 1997 session, the Maine Legislature passed and Governor King signed into law, "An Act to Restructure the State's Electric Industry, calling for deregulation of electric utilities and for open market retail competition to begin on March 1, 2000. The legislation provides a framework and targets for the PUC to implement through various rule-makings. The PUC will conduct 13 rule-makings which began in the fall of 1997 and will conclude in the fall of 1999. Also, the PUC will conduct at least two adjudicatory proceedings for each utility; one concerning divestiture, including approval of divestiture plans and asset sales and the other including stranded costs and transmission and distribution rate-making.

Given Maine's relatively high electricity prices, the restructuring of Maine's electric utilities to create retail access to electricity supplies could be the single most important factor in determining the future vitality of the State's economy. With retail access, consumers will be able to shop for electricity in a manner similar to the purchase of long-distance telephone services. The underlying premise is that enhanced competition in the generation and sale of electricity will lower costs and improve choices everywhere. The challenge lies in finessing the transition to a system where the full benefits of competition can be realized without bankrupting the utilities and compromising the reliability of the electric system and without creating unfair power market practices.

The future electric generation market in Maine is already beginning to take shape. The conjunction of deregulation with the premature closure of Maine Yankee (and other nuclear plants in the region) and the emergence of large new supplies of natural gas in the state are setting the stage for dramatic new opportunities for electricity generation. Over the past year, plans for two natural gas power projects were announced which are discusses subsequently. In addition, Maine's restructuring demands the implementation of a renewable portfolio standard which could open the way for a mix of competitively priced generation sources from indigenous sources (30% green power).

B. Natural Gas Pipelines

Next to restructuring the electric utility industry, the development of natural gas pipelines in the State is the most significant energy development since the energy crisis of the 1970's. Two major pipeline projects will provide large new supplies of natural gas for Maine industries and communities.

The Portland Natural Gas Transmission System (PNGTS) project will transport western Canadian gas from an interconnection in Quebec down through New Hampshire and Maine for delivery to the Tennessee Gas System in Haverhill, Massachusetts. This project includes a major lateral (43.5 miles) pipeline which will provide gas to pulp and paper mills in Rumford and Jay. Another proposed lateral will provide service to the S. D. Warren mill in Westbrook. Also, the

project will insure a reliable supply of gas for Northern Utilities to meet current demands and expected load growth in their current delivery network in southern and south central areas.

The second project is the Maritimes and Northeast Pipeline (M&NE) which will transport newly developed gas supplies from the Sable Island gas fields off the coast of Nova Scotia to northeastern US markets. A total of 151 laterals and spurs from this line will provide significant supplies of gas to all of the remaining pulp and paper mills and to CMP's power plant on Cousin's Island.

These potentially large new supplies of natural gas at competitive prices will provide a variety of economic, energy and environmental benefits. The expanded availability of gas will provide energy consumers with another alternative energy source. Large supplies at competitive prices will help Maine businesses to be more competitive with businesses in other regions of the country. Economic impacts studies project that a significant construction pulse will be followed by longer term benefits evolving from enhanced economic activity. Although natural gas is a fossil fuel with fixed supply, these new gas supplies will improve energy security and price stability for the foreseeable future. Because it is a cleaner burning fuel, the use of gas should contribute to attainment of restrictive national and State air emission standards.

The true costs and benefits of these pipeline projects will emerge over the next several years. The Federal Energy Regulatory Commission (FERC) has issued its preliminary determinations for the PNGTS project and phase I of the M&NE project and environmental impact assessments for both projects are well underway. Pipeline companies are seeking approvals that would enable them to be fully operational by the fall of 1998.

C. Closure of Maine Yankee

After approximately two years of troubled operation, the Maine Yankee Atomic Power Company submitted certification to the US Nuclear Regulatory Commission, on August 7, 1997, to permanently shut down the plant. The certification is irreversible and Maine Yankee immediately instituted measures to decommission the facility. While Central Maine Power and Maine Yankee attempted to find a new owner for the plant from May to August 1997, these efforts were unsuccessful. Maine Yankee stated that the economics of the operation, rising expenses for plant upgrades and projections for future market energy costs were the factors leading to the decision to permanently shut the plant down.

The series of major events leading to the closing of Maine Yankee include the discovery and repairs of cracks in the steam generator tubes in 1995 resulting in a year long outage. The issuance of a Confirmatory Order by the NRC resulted in reduced power operation and questions concerning the safety of the plant. This led to an extensive inspection by the NRC and significant and expensive improvements required of Maine Yankee. The discovery of cable separation problems led to a Confirmatory Action letter by the NRC which required the completion of certain tasks prior to restart of the plant. On January 29, 1997 Maine Yankee was placed on the NRC's *"Watch List"* of troubled nuclear plants which require increased scrutiny and regulatory attention.

The decommissioning of the plant is expected to be completed in 2005 at an estimated cost of $508.2 million. The cost includes $127.6 million to construct and maintain (until 2023) a dry cask storage facility for spent nuclear fuel at the Maine Yankee site. This cost was built-in due to the anticipated resistance by the Federal Government to take title to and remove spent fuel from this and other decommissioned nuclear plants as required by Federal law. Maine Yankee has approximately $195 million available to pay for decommissioning the plant and applied to the US Federal Energy Regulatory Commission on November 5, 1997 to recover from electrical ratepayers the shortfall in decommissioning funds.

Since the announcement that the plant would shut down, the number of employees at Maine Yankee has been reduced from 476 full-time positions and about 200 permanent contractors to about 317 employees. By February 1999 the work force is expected to be reduced to about 200 employees.

Historically Maine Yankee produced about 20% of Maine's electrical supply and exported 50% of its annual production. The energy mix in Maine has been fairly diverse with electricity supplied from production at hydro, biomass, oil and nuclear facilities. The nuclear component is expected to be replaced in the immediate future with electrical generation from natural gas as natural gas pipelines are currently planned to traverse Maine and be on-line by the year 2000.

V. Appendices

A. Glossary of Terms

Btu -- British Thermal Unit. The amount of energy required to raise the temperature of one pound of water by one degree F. Also used in terms of million btus (mmbtus)

Primary Energy -- All energy except electricity, which is a secondary form of energy.

End-Use Energy -- All energy, including electricity, except energy used to produce electricity.

Distillate -- a common term for heavier industrial oil, including grades 4, 5, and 6.

Capacity -- refers to the capability of a power plant or utility system to respond to instantaneous demand. Measured in watts, kilowatts (1,000 watts), or megawatts (1,000,000 watts).

Energy -- (in the context of electric power mix) refers to actual production or usage of electricity over time. Measured in watt-hours (kilowatt-hours, megawatt-hours, etc.)

Real Prices -- refer to prices that have been adjusted for the effects of inflation. Also referred to as "constant dollars." This report uses 1982 dollars as a constant.

Nominal Prices -- refer to prices based on the then-current value of a dollar (i.e., in 1960, 1970, etc.)

B. User's Guide to Tables

Tables 1 through 9 provide energy use and price trends on a calendar year basis from 1960 through 1994. Energy consumption estimates are broken out by the following economic sectors: Residential (Table 1), Commercial (Table 3), Industrial (Table 4), Transportation (Table 5), and Electric Generation (Table 7). Tables 2 and 6 provide historical energy price data.

Gallons (etc.) Versus Btus

The energy consumption tables provide estimates of energy use in both natural units and Tbtus, which stands for trillion btus. (A btu, or British Thermal Unit, is the amount of energy required to raise the temperature of one gallon of water by one degree F.) The term "natural units" represents energy as measured in its popular form of use or sale, such as gallons of oil or gasoline, kilowatt-hours of electricity, cords or tons of wood, etc. Converting natural units to btus, in this case trillion btus, establishes a common form of measurement so that various energy types can be compared on an equal basis. For example, 700,000 cords of wood were burned in 1994 in the residential sector, versus 238.66 million gallons of heating oil. By itself, this not helpful in comparing the relative share of oil and wood within the sector. On a btu basis, however, wood use equaled 14.7 Tbtus while oil use equaled 33.1 Tbtus. Maine households, therefore, used just over twice as much energy, in the form of oil as they did wood in 1989 (Table 1).

The "natural units" columns provide information such as how many gallons of oil were consumed, how many kilowatt-hours were used, etc. The data in the "Tbtu" columns can be used to analyze issues such as the role of a specific fuel in Maine's energy mix, to aggregate energy consumption by sector, etc. Data in either format can be used to track energy use trends of one specific fuel over time, such as total wood use during the period 1970-1989. Table 8 represents total Maine energy use in natural units, and Table 9 represents total Maine energy use in btu format. Table 11 provides the btu conversion factors used in this report.

"Primary" Versus "End-Use" Energy

Unfortunately, there is no one easy way to measure energy use, due to the role of electricity in our energy mix. Electricity is not an energy resource, per se, but is a secondary form of energy, in the sense that it is a product that is manufactured through the conversion of an energy resource (e.g., coal, hydro, nuclear, oil, etc.). Including electricity in energy consumption totals would result in double counting, since one would be measuring both the btu value of the electricity used and the btus of energy used to generate the electricity. The problem is most easily addressed by dividing energy use into two broad categories: primary and end-use energy. The term "primary" energy refers to all energy other than electricity itself. Primary energy represents our basic energy resources. The term "end-use" energy refers to all energy except energy used to generate electricity.

Another way to avoid the double counting problem is to assign to electricity the btu value of the primary energy used in its generation, and then exclude energy consumed within the utility (electric generation) sector from the energy mix. While a kilowatt-hour of electricity, used in an end-use application (such as a light bulb), provides 3,412 btus of energy, it general requires over 10,000 btus of primary energy to generate that kilowatt hour. In other words, it commonly takes about 3 btus of primary energy to produce 1 btu of electricity. This represents a typical level of power plant conversion efficiency. Assigning the higher btu conversion factor to electricity, therefore, captures the energy used in its production, but tends to distort how energy is really used in the Maine economy.

"Real" Versus "Nominal" Prices

Tables 2 and 6 provide historical energy prices for the residential, commercial, industrial and transportation sectors. All prices are given in both nominal and real dollars. Nominal prices are the actual prices consumers paid in any specific year. Real prices are nominal prices that have been adjusted for the effects of inflation. Real prices, therefore, represent prices in "constant" dollars, in this case using the value of a dollar in 1982 as a standard. For example gasoline in Maine cost $.29 per gallon in 1960 (in 1960 dollars), and $1.13 in 1989 (in 1989 dollars). But when adjusted for the effects of inflation, the 1960 price (in 1982 dollars) was equal to $.94/gal, compared with a 1989 price of $.89/gal. Thus, in constant dollars, gasoline actually cost 5 cents less in 1989 than it did in 1960 (Table 6).

Additional Economic and Transportation Data

Table 10 provides additional Maine-specific data on population, number households, total registered vehicles, vehicle miles traveled (VMT), Gross State Product and Total Personal Income, and the price deflators used to compute nominal to real dollars in the price tables. This data can be used in conjunction with the consumption and price tables to analyze issues such as energy use per household, how prices affect consumption, the energy "efficiency" of the Maine economy, gasoline use relative to VMT, etc.

Maine's Electric Power Mix

Table 11, an "Inventory of Electric Power Capacity and Generation: 1994, " provides a detailed listing of where and how the electricity consumed in Maine, during 1994, was generated. The multi-page table begins with a summary sheet that breaks down Maine's electric power mix by fuel, the type of entity that produces the power, and by the name of the utility system that ultimately sells the power.

Note that this table focuses only on the electricity consumed within Maine, some of which is generated by Canadian or other New England sources, while Table 7 looks at the energy consumed within Maine to generate electricity, and ignores any imports or exports of electricity. This distinction is necessary since electric power is such a dynamic commodity some of the electricity produced within Maine (such as part of Maine Yankee's production) is sold to consumers beyond Maine's borders, while the electricity used within Maine may be produced

within Maine or elsewhere. Table 7, therefore, represents that portion of Maine's overall energy mix that is related to the production of electric power, irrespective of where that power may be ultimately consumed. Table 12 represents Maine's electric power mix -- I.e., how the electric energy used within Maine is produced, by fuel type, location, and type of producer (utility or non-untility).

"Utility" Versus "Non-Utility" Electric Generation

As of 1990, over 30 percent of Maine's electric energy was produced by non-utility power producer. Much of this power is produced by Maine's pulp and paper industries (this is commonly referred to as "cogeneration"), while an additional amount is produced by stand-alone independent power producers. For the purposes of this report, energy consumption within the "industrial sector" (which has historically included energy related cogeneration and independent power) was adjusted to reflect more accurately the energy used specifically for traditional industrial operations, versus the energy used to generate electricity for sale through the utility grid.

The industrial consumption estimates in Table 4, therefore, exclude energy used by industrial and stand-alone power plants used to generated electricity for sale to utilities. This energy is instead included under the category "electricity generation" to more accurately reflect Maine's current energy mix. Continuing to include this energy in the industrial category would significantly overstate the amount of energy used within Maine's industrial sector for truly "industrial" purposes, and would understate the amount of energy actually used to generate electricity for sale to consumers through the utility grid.

"Capacity" Versus "Energy"

Table 11 identifies the entities responsible for providing Maine with electric power by two distinct measures -- capacity and energy. Capacity refers to the rated capability of a power plant (or utility system) to meet a certain level of instantaneous demand, and is measured in watts (in this case, megawatts, equal to 1,000,000 watts and abbreviated as MW). Energy refers to the actual production of a plant (or an amount of electricity consumed) over a given period, and is measured in watt-hours (in this case, megawatt-hours, or MWH).

The energy versus capacity distinction is particularly important with respect to oil. While oil-fired power plants represent the single largest fuel type in Maine's electric mix on a capacity basis (at 30 percent), these plants were used to provide only 4.6 percent of the actual electrical energy used in Maine in 1994. This is largely because oil is one of the most expensive resources in the mix and is only used when necessary, while the use of less expensive resources, such as nuclear and hydro, are maximized.

Self-Generation and "Grid-Connected"

Note also that Table 11 deals only with electric power consumed within Maine that is sold through the utility grid. Maine industries consume a significant degree of additional

] electricity that is produced and consumed by those industries on-site. In addition to the totals listed in Table 11, the State Planning Office estimates that Maine consumes annually approximately 1 million MWHs of self-generated hydropower, and a significant amount of wood-fired power (for which no real data is currently available).

A Note on Sources

This data is presented as the most accurate that currently exists. Readers should note, however, that the consumption figures are presented as estimates, and that the price data is presented in terms of average annual prices by fuel and sector.

The data is derived primarily from State Energy Resource Plans and federal sources, particularly the State Energy Data Report (SEDS) published annually by the US Department of Energy/Energy Information Administration. Adjustments were made to the SEDS data where obvious inaccuracies or inconsistencies were identified. Energy price data is derived partly from primary Maine sources and partly from the DOE/EIA State Energy Price and Expenditure Report (SEPER). The electric utility data in Table 12 is based on utility reports to the Federal Energy Regulatory Commission (specifically, FERC Form 1's), utility annual reports, and State Planning Office research. Table 11 updates Maine's electric power inventory to 1994 and corrects previously published data.

Primary Maine sources were used whenever possible to corroborate accuracy or fill in gaps. Recent year transportation fuel data is from the Maine Department of Transportation, and is based on fuel tax revenues. Recent year data on industrial wood and residual oil use is from the Maine Department of Environmental Protection, and is based on survey data. Residential wood use data and industrial hydro data is based on surveys performed by the Office of Energy Resources and updated by the State Planning Office.

Data Available on Diskette

The tables were produced using Lotus 123 spreadsheet software. The data can easily be made available on computer diskette in a wide variety of popular formats for the cost of materials and postage. For further information, contact our Office at 207-287-3261.

Table 1- Residential Energy Consumption Estimates

Year	Coal		Natural Gas		Heating Oil		Kerosene		Propane		Wood		Electricity		Total Energy
	TBTU	1000 Tons	TBTU	Million ubic ft	TBTU	Million Gallons	TBTU	Million Gallons	TBTU	Million Gallons	TBTU	1000 Cords	TBTU	Million KWH	TBTU
1960	2.35	94.0			27.5	198.6	11.9	87.1	1.4	15.0	5.8	275.0	3.4	993.3	52.3
1961	2.19	87.5			32.6	234.9	14.8	109.0	1.5	16.5	5.9	280.0	3.6	1,046.9	60.6
1962	1.90	76.0			34.4	247.9	13.0	95.7	1.7	18.7	6.0	285.0	3.7	1,096.8	60.7
1963	1.72	68.5			37.2	268.0	13.9	102.4	1.9	21.1	6.1	290.0	3.9	1,130.7	64.7
1964	1.40	55.8			33.5	241.2	10.4	76.3	2.1	23.0	6.2	295.0	4.0	1,172.2	57.5
1965	1.43	56.9			35.8	257.8	9.6	70.5	1.5	16.7	6.3	300.0	4.2	1,224.0	58.8
1966	1.26	50.4	0.4	338.3	33.1	238.9	8.5	62.8	1.6	17.6	6.4	305.0	4.4	1,293.6	55.7
1967	0.95	37.8	0.4	397.4	39.4	284.1	9.9	72.9	1.5	16.6	6.5	310.0	4.6	1,346.7	63.3
1968	0.74	29.4	0.4	358.7	40.9	295.2	11.9	87.6	1.6	17.5	6.6	315.0	5.0	1,455.0	67.1
1969	0.64	25.3	0.5	493.4	43.4	313.1	11.9	87.4	1.6	17.4	6.7	320.0	5.4	1,569.3	70.1
1970	0.56	22.2	0.5	518.9	45.9	330.8	9.4	68.8	1.5	15.8	6.8	325.0	5.9	1,722.8	70.5
1971	0.53	21.0	0.6	552.5	46.1	332.6	9.5	69.5	1.4	15.5	6.9	330.0	6.4	1,887.7	71.5
1972	0.42	16.7	0.6	569.9	49.1	353.7	9.4	69.1	1.7	18.1	7.0	335.0	7.3	2,129.0	75.5
1973	0.40	16.0	0.6	595.3	47.6	343.1	6.9	50.6	1.7	18.6	7.1	340.0	7.7	2,263.4	72.0
1974	0.37	14.4	0.6	609.2	46.2	333.4	5.8	42.8	1.9	20.4	7.4	350.0	8.2	2,408.3	70.5
1975	0.30	11.6	0.7	725.0	44.5	321.1	5.3	38.9	2.2	24.5	7.5	355.0	8.5	2,487.2	69.1
1976	0.25	9.9	0.8	794.0	52.8	380.8	6.9	50.7	2.8	30.6	8.7	415.0	9.5	2,770.6	81.7
1977	0.28	11.0	0.8	748.0	57.9	417.8	5.4	39.7	2.9	32.2	10.0	475.0	9.8	2,859.4	87.1
1978	0.20	8.0	0.8	765.0	52.8	380.5	3.9	28.9	2.6	28.4	10.5	500.0	10.2	2,996.0	81.0
1979	0.16	6.2	0.7	709.0	42.4	305.9	3.1	22.6	3.4	37.3	12.5	595.0	10.3	3,016.0	72.6
1980	0.28	11.2	0.6	555.0	37.1	267.6	2.3	16.9	1.5	15.9	13.8	655.0	10.2	2,998.0	65.7
1981	0.52	20.5	0.6	573.6	30.4	219.3	1.3	9.7	1.3	13.7	20.9	995.0	10.4	3,033.1	65.4
1982	0.62	24.7	0.6	585.6	28.8	207.5	1.5	11.3	1.5	16.0	21.3	1,015.0	10.9	3,181.6	65.2
1983	0.48	19.2	0.6	542.1	18.9	136.1	1.5	11.1	1.7	19.0	22.9	1,089.0	11.0	3,217.7	57.0
1984	0.57	22.7	0.6	544.2	19.4	139.6	1.6	11.4	0.9	9.6	20.7	986.8	11.5	3,368.7	55.1
1985	0.51	20.3	0.5	530.6	28.4	205.0	2.3	17.2	1.3	14.1	21.6	1,026.3	11.7	3,419.3	66.3
1986	0.63	25.2	0.6	545.7	33.1	238.7	1.8	13.2	1.9	21.0	19.0	905.3	12.2	3,577.6	69.2
1987	0.54	21.2	0.6	536.3	31.8	229.4	2.1	15.1	2.9	31.4	18.9	900.0	12.7	3,725.6	69.4
1988	0.40	15.8	0.6	569.7	34.8	250.7	2.1	15.1	3.4	37.5	15.9	757.9	13.3	3,903.6	70.5
1989	0.30	12.0	0.6	585.9	33.1	238.7	2.2	16.2	3.4	39.3	14.7	700.0	13.7	4,009.0	68.0
1990	0.45	18.0	0.7	648.0	29.3	211.3	3.2	23.5	3.1	36.2	11.9	568	13.4	3,932.0	62.0
1991	0.18	7.0	0.7	722.0	30.0	216.3	3.4	25.0	3.4	39.4	10.5	500.3	13.0	3,817.0	61.2
1992	0.38	15.0	0.9	872.5	30.8	222.1	2.7	19.9	2.8	32.2	9.4	446.9	13.1	3,830.0	60.1
1993	0.28	11.0	0.9	878.9	33.3	240.1	4.2	30.9	3.4	40.0	8.2	392.4	13.2	3,872.0	63.5
1994	0.10	4.0	0.9	878.9	32.9	237.2	4.3	31.6	3.6	41.4	9.3	442.0	12.6	3,692.0	63.7
1995	0.05	2.0	0.9	878.9	43.0	310.0	6.2	45.6	4.1	47.0	8.3	392.6	12.4	3,629.0	74.9

Table 2- Residential Energy Prices: Nominal and Real (Real = 1982$)

Year	Coal $/Ton		Natural Gas $/ccf		Heating Oil $/Gal		Kerosene $/Gal		Propane $/Gal		Wood $/Cord		Electricity $/KWH	
	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real
1960	$33.00	$7.39			$0.15	$0.03	$0.16	$0.04	$0.13	$0.03	$20.00	$4.48	$0.03	$0.01
1961	$33.48	$7.53			$0.15	$0.03	$0.16	$0.04	$0.12	$0.03	$20.00	$4.50	$0.03	$0.01
1962	$33.68	$7.61			$0.15	$0.03	$0.16	$0.04	$0.11	$0.02	$20.00	$4.52	$0.03	$0.01
1963	$34.71	$7.84			$0.15	$0.03	$0.16	$0.04	$0.12	$0.03	$20.00	$4.52	$0.03	$0.01
1964	$35.40	$7.97			$0.15	$0.03	$0.16	$0.04	$0.12	$0.03	$21.00	$4.73	$0.03	$0.01
1965	$35.56	$8.14			$0.16	$0.04	$0.17	$0.04	$0.13	$0.03	$20.75	$4.75	$0.03	$0.01
1966	$36.00	$8.39	$0.32	$0.07	$0.16	$0.04	$0.18	$0.04	$0.13	$0.03	$20.50	$4.78	$0.03	$0.01
1967	$36.91	$8.78	$0.30	$0.07	$0.17	$0.04	$0.18	$0.04	$0.14	$0.03	$21.25	$5.06	$0.03	$0.01
1968	$38.81	$9.39	$0.31	$0.08	$0.17	$0.04	$0.18	$0.04	$0.12	$0.03	$21.50	$5.20	$0.03	$0.01
1969	$41.48	$10.29	$0.28	$0.07	$0.18	$0.04	$0.18	$0.04	$0.11	$0.03	$20.75	$5.15	$0.03	$0.01
1970	$44.30	$11.30	$0.29	$0.07	$0.18	$0.05	$0.19	$0.05	$0.13	$0.03	$25.25	$6.44	$0.03	$0.01
1971	$47.01	$12.46	$0.33	$0.09	$0.19	$0.05	$0.20	$0.05	$0.14	$0.04	$25.00	$6.63	$0.03	$0.01
1972	$48.78	$13.27	$0.36	$0.10	$0.20	$0.05	$0.21	$0.06	$0.14	$0.04	$24.00	$6.53	$0.03	$0.01
1973	$52.10	$15.32	$0.36	$0.11	$0.22	$0.06	$0.22	$0.06	$0.15	$0.04	$26.65	$7.84	$0.03	$0.01
1974	$64.00	$24.38	$0.40	$0.15	$0.37	$0.14	$0.39	$0.15	$0.24	$0.09	$29.60	$11.28	$0.03	$0.01
1975	$81.10	$34.14	$0.42	$0.18	$0.45	$0.19	$0.47	$0.20	$0.31	$0.13	$32.85	$13.83	$0.04	$0.02
1976	$85.30	$38.47	$0.45	$0.20	$0.44	$0.20	$0.46	$0.21	$0.32	$0.14	$36.50	$16.46	$0.04	$0.02
1977	$89.05	$43.99	$0.50	$0.25	$0.48	$0.24	$0.51	$0.25	$0.42	$0.21	$37.50	$18.53	$0.04	$0.02
1978	$93.60	$49.14	$0.54	$0.28	$0.51	$0.27	$0.54	$0.28	$0.43	$0.23	$47.25	$24.81	$0.04	$0.02
1979	$101.00	$66.36	$0.57	$0.37	$0.71	$0.47	$0.76	$0.50	$0.46	$0.30	$43.00	$28.25	$0.05	$0.03
1980	$110.00	$94.60	$0.63	$0.54	$1.00	$0.86	$1.17	$1.01	$0.63	$0.54	$56.00	$48.16	$0.06	$0.05
1981	$135.00	$131.90	$0.74	$0.72	$1.24	$1.21	$1.35	$1.32	$1.02	$1.00	$57.00	$55.69	$0.07	$0.07
1982	$130.00	$128.96	$0.86	$0.85	$1.21	$1.20	$1.32	$1.31	$1.27	$1.26	$58.00	$57.54	$0.07	$0.07
1983	$135.00	$134.87	$0.99	$0.99	$1.02	$1.02	$1.21	$1.21	$1.30	$1.30	$63.00	$62.94	$0.07	$0.07
1984	$135.00	$136.22	$0.96	$0.97	$1.03	$1.04	$1.27	$1.28	$1.40	$1.41	$64.12	$64.70	$0.08	$0.08
1985	$135.00	$137.16	$0.91	$0.92	$0.98	$1.00	$1.10	$1.12	$1.35	$1.37	$66.60	$67.67	$0.08	$0.08
1986	$135.00	$119.07	$0.85	$0.75	$0.73	$0.64	$1.00	$0.88	$1.32	$1.16	$67.14	$59.22	$0.08	$0.07
1987	$130.00	$115.18	$0.80	$0.71	$0.73	$0.65	$1.00	$0.89	$1.32	$1.17	$71.01	$62.91	$0.08	$0.07
1988	$130.00	$116.09	$0.73	$0.65	$0.76	$0.68	$1.02	$0.91	$1.31	$1.17	$70.80	$63.22	$0.08	$0.07
1989	$148.00	$139.56	$0.71	$0.67	$0.83	$0.78	$1.10	$1.04	$1.30	$1.23	$75.00	$70.73	$0.08	$0.08
1990	$105.25	$107.46	$0.78	$0.79	$1.04	$1.06	$1.21	$1.23	$1.32	$1.35	$75.00	$76.58	$0.09	$0.09
1991	$101.75	$104.29	$0.70	$0.72	$1.02	$1.04	$1.18	$1.21	$1.45	$1.49	$75.00	$76.88	$0.10	$0.11
1992	$105.25	$108.41	$0.69	$0.71	$0.92	$0.95	$1.07	$1.10	$1.12	$1.15	$75.00	$77.25	$0.11	$0.12
1993	$101.75	$106.02	$0.75	$0.78	$0.88	$0.92	$1.02	$1.06	$1.26	$1.31	$75.00	$78.15	$0.12	$0.12
1994	$101.75	$106.43	$0.79	$0.83	$0.87	$0.91	$1.01	$1.06	$1.05	$1.10	$75.00	$78.45	$0.12	$0.13

Table 3 - Commercial Energy Consumption Estimates

	Coal		Natural Gas		Heating Oil		Kerosene		Propane		Gasoline		Residual		Electricity		Total
Year	TBTU	1000 Tons	TBTU	Million Cubic Feet	TBTU	Million Gallons	TBTU	Million Gallons	TBTU	Million Gallons	TBTU	Million Gallons	TBTU	Million Gallons	TBTU	Million KWH	Energy TBTU
1960	2.7	112.9			5.8	41.8	0.6	4.2	0.2	2.6	0.2	1.2	0.9	6.1	1.9	542.3	12.3
1961	2.5	105.9			6.9	49.5	0.7	5.2	0.3	3.0			0.9	5.7	2.0	595.6	13.3
1962	2.2	92.3			7.2	52.2	0.6	4.6	0.3	3.3			0.5	3.1	2.2	650.6	13.1
1963	2.0	81.9			7.8	56.5	0.7	4.9	0.3	3.7			0.5	3.1	2.4	695.8	13.7
1964	1.4	59.9			7.1	50.8	0.5	3.7	0.4	4.0			1.1	7.3	2.6	759.6	13.1
1965	1.6	67.2			7.5	54.3	0.5	3.4	0.3	3.0			0.5	3.1	2.8	819.4	13.1
1966	1.5	61.2	0.2	175.8	7.0	50.3	0.4	3.0	0.3	3.1			0.8	5.1	2.7	801.5	12.8
1967	1.0	41.9	0.3	253.9	8.3	59.8	0.5	3.5	0.3	3.0			0.8	5.0	2.5	737.9	13.6
1968	0.7	28.1	0.2	214.9	8.6	62.2	0.6	4.2	0.3	3.1			0.9	5.9	2.7	784.8	13.9
1969	0.6	23.5	0.3	302.7	9.2	66.0	0.6	4.2	0.3	3.1			1.4	9.2	3.0	873.7	15.2
1970	0.4	18.5	0.4	410.2	9.7	69.7	0.5	3.3	0.3	2.8	0.2	1.7	1.8	12.3	3.3	975.4	16.6
1971	0.4	17.2	0.5	459.0	9.7	70.1	0.5	3.3	0.3	2.7	0.2	1.7	4.1	27.6	3.6	1,053.8	19.2
1972	0.3	14.4	0.5	468.8	10.3	74.6	0.5	3.3	0.3	3.2	0.2	1.7	4.1	27.5	4.0	1,172.9	20.2
1973	0.3	13.8	0.4	429.7	10.0	72.3	0.3	2.4	0.3	3.3	0.2	1.3	3.8	25.5	4.3	1,256.6	19.8
1974	0.3	12.9	0.5	439.5	9.7	70.2	0.3	2.1	0.3	3.6	0.2	1.2	3.2	21.5	4.2	1,239.6	18.8
1975	0.3	10.2	0.5	507.8	9.4	67.6	0.3	1.8	0.4	4.4	0.2	1.7	2.1	14.0	5.4	1,567.7	18.5
1976	0.2	7.4	0.5	498.1	11.1	80.3	0.3	2.4	0.5	5.4	0.2	1.7	3.4	22.3	5.8	1,698.4	22.0
1977	0.2	9.3	0.5	498.1	12.2	88.0	0.3	1.9	0.5	5.7	0.2	1.8	3.5	23.1	6.0	1,750.4	23.4
1978	0.1	5.4	0.6	586.0	11.1	80.2	0.2	1.4	0.5	5.0	0.2	1.8	2.9	19.1	6.2	1,817.0	21.8
1979	0.1	4.2	0.7	644.6	8.9	64.5	0.2	1.1	0.6	6.6	0.2	1.9	2.5	16.6	5.9	1,721.0	19.0
1980	0.3	12.5	0.9	859.4	10.7	77.3	0.4	2.9	0.3	2.8	0.3	2.0	4.3	28.6	5.9	1,717.0	23.0
1981	0.4	15.9	1.1	1,045.0	10.1	73.1	0.3	1.9	0.2	2.4	0.3	2.2	2.3	15.1	6.1	1,787.2	20.7
1982	0.7	28.7	1.2	1,191.5	8.3	59.5	0.1	0.9	0.3	2.8	0.3	2.2	4.0	26.9	6.3	1,831.3	21.1
1983	0.5	22.5	1.2	1,123.1	8.2	58.8	0.4	2.8	0.3	3.4	0.5	2.3	4.7	31.1	6.5	1,916.8	22.3
1984	0.7	27.4	1.2	1,132.9	8.4	60.4	0.3	1.8	0.2	1.6	0.6	2.3	4.5	30.2	7.8	2,276.0	23.5
1985	0.7	27.6	1.2	1,152.4	5.6	40.7	0.3	1.8	0.2	2.5	0.5	4.8	4.5	30.3	8.0	2,338.0	21.0
1986	0.9	38.2	1.3	1,220.8	9.1	65.6	0.1	0.5	0.3	3.7	0.6	4.4	5.8	38.7	8.5	2,490.0	26.6
1987	0.7	29.2	1.3	1,269.6	8.6	62.3	0.1	1.0	0.5	5.6	0.5	4.2	3.1	20.8	9.0	2,641.5	23.9
1988	0.6	23.0	1.4	1,396.5	10.4	75.1	0.4	3.1	0.6	6.7	0.5	3.9	4.6	30.8	9.4	2,744.2	27.9
1989	0.4	16.2	1.6	1,582.1	9.4	67.8	0.3	2.2	0.6	6.6	0.6	4.4	5.3	35.3	9.6	2,826.0	27.8
1990	0.6	25.0	1.6	1,601.6	9.8	70.7	0.4	2.9	0.6	6.4	0.5	4.8	5.4	36.3	9.6	2,847.0	28.6
1991	0.1	6.0	1.8	1,777.4	8.4	60.6	0.7	5.1	0.6	7.0	0.3	4.2	4.5	30.1	9.7	2,857.0	26.2
1992	0.5	21.0	2.2	2,109.5	10.0	72.1	0.4	2.9	0.5	5.5	0.3	2.3	7.9	52.7	9.9	2,900.0	31.7
1993	0.4	15.0	2.3	2,246.2	13.2	95.2	1.0	7.4	0.6	6.6	0.1	2.1	4.6	30.7	10.4	3,040.0	32.6
1994	0.1	2.0	2.4	2,343.8	13.4	96.6	0.9	6.6	0.6	6.6	0.1	0.5	4.9	32.7	10.1	2,962.0	32.5
1995	0.0	0.0	2.5	2,441.5	12.9	93.0	0.9	6.6	0.7	7.7	0.1	0.5	2.4	16.0	10.1	2,973.0	29.6

Table 4 - Industrial Energy Consumption Estimates

	Coal		Natural Gas		Heating Oil		Kerosene		Propane		Gasoline		Residual		Wood		Hydro		Electricity		Energy
		1000		Million		Million		Million		Million		Million		Million		1000		Million		Million	Total
Year	TBTU	Tons	TBTU	Cubic ft.	TBTU	Gallons	TBTU	Gallons	TBTU	Gallons	TBTU	Gallons	TBTU	Gallons	TBTU	Tons	TBTU	KWH	TBTU	KWH	TBTU
1960	0.0	588.6			2.3	16.9	0.6	4.3	0.2	1.7	0.9	7.0	16.6	110.6	1.5	140.6	9.7	946.4	4.3	1,246.3	36.0
1961	14.5	592.6			2.4	17.4	0.6	4.7	0.2	1.8			15.1	100.9	1.6	150.0	9.1	882.7	4.4	1,294.6	47.9
1962	13.5	550.1			2.7	19.6	0.7	5.0	0.2	1.8			8.5	56.5	1.7	159.4	8.6	836.3	4.7	1,374.0	40.5
1963	8.7	355.2			2.8	20.2	0.8	5.7	0.3	2.7			8.3	55.6	1.8	168.8	9.8	950.7	4.8	1,403.1	37.2
1964	5.2	210.0			2.9	21.0	1.3	9.7	0.3	3.1			19.3	128.9	1.9	178.1	8.6	834.0	5.1	1,492.6	44.5
1965	4.9	198.2			2.9	21.0	1.6	11.7	0.4	4.4			8.0	53.2	2.0	187.5	7.3	707.4	5.9	1,714.7	32.8
1966	4.6	186.8			3.4	24.2	1.0	7.3	0.5	5.6			13.4	89.2	2.3	219.4	7.7	751.4	6.3	1,840.9	39.1
1967	3.6	146.9	0.1	101.1	3.9	28.0	3.0	22.1	0.5	5.9			15.5	103.4	2.6	251.3	8.8	857.3	6.6	1,919.6	44.6
1968	3.1	127.8	0.2	223.1	4.5	32.5	0.5	3.3	0.4	4.8			15.8	105.2	2.9	281.3	9.4	912.0	7.6	2,219.6	44.4
1969	3.0	123.6	0.3	313.5	4.8	34.8	0.3	2.4	0.7	7.5			24.2	161.6	3.2	309.4	8.8	858.0	8.1	2,362.9	53.5
1970	1.1	46.6	0.4	351.8	4.7	33.8	0.3	2.3	0.7	7.5	0.7	5.8	32.2	214.9	2.5	337.5	13.3	1,296.0	8.1	2,369.9	64.1
1971	1.3	54.7	0.4	426.0	4.8	34.9	0.3	2.3	0.7	7.8	0.6	4.6	72.7	484.7	4.3	412.5	12.0	1,164.0	8.1	2,375.9	105.3
1972	0.6	25.5	0.5	448.7	4.7	33.9	0.3	2.4	0.9	10.2	0.5	4.1	72.9	485.9	4.9	468.8	13.0	1,262.0	8.6	2,524.8	106.9
1973	0.7	27.4	0.6	596.3	4.7	33.7	0.2	1.8	0.9	10.0	0.5	3.6	67.5	449.9	5.4	515.6	14.1	1,366.0	8.9	2,612.2	103.4
1974	1.3	51.7	0.6	546.0	4.3	30.7	0.2	1.7	0.8	8.2	0.5	3.7	56.5	376.4	6.5	628.1	13.5	1,309.0	9.4	2,766.9	93.5
1975	0.8	31.1	0.7	699.0	4.0	28.7	0.3	2.5	0.9	10.2	0.4	3.3	46.8	311.8	7.4	712.5	12.8	1,247.0	8.5	2,477.5	82.6
1976	0.6	25.1	0.8	745.0	4.5	32.3	0.4	2.8	1.0	10.4	0.3	2.7	59.1	394.1	7.9	761.3	15.1	1,465.0	9.1	2,652.2	98.7
1977	0.1	4.0	0.8	751.0	4.7	34.2	0.4	2.9	1.0	10.4	0.4	2.9	61.4	409.5	8.2	785.6	15.2	1,473.0	10.1	2,961.4	102.2
1978	0.4	15.7	0.8	766.0	4.1	29.4	0.4	2.6	0.9	10.3	0.3	2.6	50.0	333.0	8.4	810.0	13.5	1,312.0	10.8	3,164.0	89.5
1979	0.5	21.0	0.8	759.8	4.4	31.7	0.2	1.5	2.3	24.7	0.4	3.0	43.9	292.9	8.7	832.5	14.4	1,401.0	11.4	3,335.0	87.0
1980	2.4	98.0	0.8	747.0	4.4	32.0	0.2	1.2	1.5	16.0	0.4	3.2	25.4	169.6	13.6	1,305.0	12.1	1,174.0	11.8	3,470.0	72.6
1981	2.2	90.5	0.7	705.7	4.3	31.3	0.1	0.5	1.1	12.1	0.2	1.7	33.1	220.5	15.6	1,500.0	14.5	1,408.0	11.7	3,419.2	83.5
1982	5.6	227.1	0.9	840.8	5.3	38.4	0.1	0.9	1.3	13.8	0.3	2.5	29.0	193.3	19.3	1,853.1	14.8	1,437.0	12.7	3,713.7	89.2
1983	4.8	196.7	0.8	755.5	3.7	26.7	0.1	0.8	1.0	10.4	0.2	1.7	26.4	176.3	14.6	1,402.1	13.5	1,309.0	14.7	4,302.1	79.7
1984	3.7	150.0	0.8	787.1	3.8	27.4	0.1	0.5	0.9	9.6	0.5	3.8	25.7	171.0	16.0	1,540.8	14.9	1,449.0	13.6	3,978.1	79.9
1985	3.9	158.0	0.9	865.2	2.7	19.1	0.1	0.6	0.7	7.8	0.7	5.2	26.9	179.3	15.6	1,498.1	12.1	1,171.0	13.9	4,067.1	77.3
1986	7.7	312.6	0.7	712.8	3.2	23.3	0.1	0.4	1.4	14.8	0.7	5.5	27.5	183.4	16.7	1,603.1	14.2	1,382.0	14.1	4,135.3	86.2
1987	5.6	226.6	0.9	865.3	5.4	38.6	0.1	0.9	1.0	11.3	0.7	5.8	36.2	241.1	19.8	1,899.4	10.5	1,021.1	14.9	4,351.1	94.9
1988	5.9	240.6	1.2	1,165.4	7.2	51.9	0.2	1.1	1.8	19.8	0.7	5.5	33.2	221.2	14.2	1,366.6	9.9	963.3	15.8	4,616.1	90.0
1989	6.1	247.0	1.4	1,367.2	6.3	45.4	0.1	0.7	1.6	17.5	0.7	5.9	42.0	280.0	14.1	1,359.9	11.4	1,103.1	15.7	4,601.4	99.4
1990	5.5	222.0	2.0	1,976.8	4.1	29.7	0.2	1.1	1.3	15.0	0.5	3.9	30.5	204.0	17.7	1,900.0	12.5	1,215.1	16.2	4,750.0	90.5
1991	9.0	361.0	2.2	2,226.8	4.5	32.7	0.1	1.1	1.3	14.8	0.5	4.2	33.5	223.9	20.8	2,000.0	14.7	1,427.5	16.1	4,709.0	102.7
1992	20.6	820.0	2.1	2,047.6	4.4	31.6	0.1	0.6	1.1	13.3	0.5	4.3	37.9	252.9	24.9	2,393.5	12.6	1,227.2	16.2	4,753.0	120.4
1993	10.6	423.0	1.8	1,757.9	7.3	52.8	0.3	2.2	0.8	9.9	0.8	6.1	43.7	292.0	13.9	1,339.7	12.4	1,205.1	17.2	5,040.0	108.8
1994	11.4	458.0	1.8	1,757.9	8.2	59.4	0.4	3.0	0.7	8.5	0.9	6.8	57.9	386.5	13.2	1,277.2	13.2	1,280.0	16.9	4,952.0	124.6
1995	7.0	279.0	2.0	1,953.2	6.8	49.0	0.2	1.5	0.8	8.7	0.9	7.1	47.1	314.0			12.1	1,177.9	16.9	4,959.0	93.8

Table 5 - Transportation Energy Consumption Estimates

Year	Aviation Fuel		Jet Fuel		Diesel Fuel		Propane Fuel		Residual Fuel		Motor Gasoline		Energy
	TBTU	Million Gallons	TBTU	Million Gallons	TBTU	Million Gallons	TBTU	Million Gallons	TBTU	Million Gallons	TBTU	Million Gallons	Total TBTU
1960	0.26	2.04	10.20	20.13	7.29	52.55	0.01	0.04	4.07	32.59	44.01	352.09	55.63
1961	0.24	1.91	12.50	20.57	6.17	44.48					44.55	356.41	50.96
1962	0.37	2.97	3.01	22.29	5.62	40.56					44.99	359.91	50.98
1963	0.26	2.05	3.08	22.81	6.69	48.24					45.70	365.58	52.65
1964	0.49	3.92	3.13	23.19	7.33	52.88					46.21	369.66	54.03
1965	0.37	2.99	2.59	19.15	6.98	50.35					47.97	383.74	55.32
1966	0.66	5.29	2.70	20.00	7.55	54.45					49.48	395.85	57.69
1967	0.45	3.60	3.00	22.19	5.61	40.47					50.50	404.03	56.56
1968	0.33	2.63	3.76	27.89	7.29	52.55					53.42	427.37	61.04
1969	0.15	1.20	5.22	38.65	8.33	60.08					54.86	438.86	63.34
1970	0.38	3.06	12.50	43.66	8.07	58.17	0.02	0.13	7.43	59.43	57.91	463.31	73.81
1971	0.36	2.91	13.50	48.67	8.73	62.94	0.02	0.13	8.53	68.25	60.40	483.23	78.04
1972	0.38	3.03	12.80	47.48	9.60	69.22	0.02	0.17	17.92	143.39	63.58	508.67	91.50
1973	0.36	2.90	13.20	55.42	9.66	69.68	0.03	0.21	18.43	147.42	65.64	525.11	94.12
1974	0.33	2.66	11.70	43.03	9.22	66.51	0.03	0.21	8.47	67.79	65.07	520.58	83.12
1975	0.30	2.37	10.80	38.94	8.88	64.02	0.02	0.13	4.90	39.23	66.43	531.41	80.53
1976	0.33	2.65	10.60	78.39	10.58	76.30	0.02	0.17	4.77	38.18	69.81	558.51	85.51
1977	0.35	2.77	12.70	94.00	11.19	80.66	0.03	0.21	2.82	22.60	70.85	566.83	85.24
1978	0.34	2.68	12.90	95.25	11.50	82.93	0.04	0.34	1.63	13.06	71.79	574.31	85.30
1979	0.38	3.02	12.20	90.17	10.63	76.67	0.04	0.29	3.95	31.63	65.35	522.77	80.35
1980	0.43	3.44	10.20	75.84	9.28	66.92	0.05	0.38	1.10	8.78	61.82	494.53	72.67
1981	0.25	2.00	8.40	62.42	8.74	63.02	0.02	0.17	3.33	26.63	60.77	486.19	73.11
1982	0.20	1.56	8.70	64.28	10.69	77.05	0.06	0.50	3.35	26.80	62.02	496.18	76.32
1983	0.24	1.90	8.20	60.62	11.72	81.09	0.08	0.63	0.09	0.71	63.50	508.01	75.63
1984	0.23	1.83	8.30	61.23	15.69	113.12	0.11	0.88	0.09	0.76	66.35	530.80	82.47
1985	0.22	1.74	8.90	66.16	16.40	118.28	0.08	0.63	0.11	0.88	68.50	548.00	85.31
1986	0.30	2.42	8.80	65.19	18.27	131.71	0.12	0.97	0.38	3.02	72.75	582.00	91.82
1987	0.28	2.23	9.90	73.29	20.18	145.53	0.08	0.63	0.28	2.23	75.88	607.00	96.70
1988	0.35	2.77	11.90	88.02	16.17	116.62	0.16	1.26	2.19	17.56	82.25	658.00	101.12
1989	0.36	2.86	12.40	91.85	17.14	123.58	0.16	1.26	1.04	8.36	78.50	627.64	97.20
1990	0.33	2.60	14.00	106.18	15.45	111.38	0.09	0.71	0.78	6.26	76.42	611.38	93.07
1991	0.22	1.76	13.20	100.34	14.80	106.72	0.09	0.71	0.61	4.87	76.02	608.15	91.74
1992	0.22	1.72	10.50	79.97	15.86	114.33	0.08	0.63	0.82	6.55	76.56	612.50	93.53
1993	0.19	1.55	8.30	62.50	15.97	115.12	0.07	0.55	1.50	11.97	77.22	617.76	94.94
1994	0.18	1.47	5.21	41.66	17.96	129.52	0.12	0.92	1.24	9.91	77.94	623.54	97.44
1995	0.18	1.47	4.42	35.32	18.13	130.72	0.06	0.46	1.09	8.69	76.27	610.15	95.73

TABLE 6 - Commercial, Industrial, and Transportation Energy Prices Nominal & Real (Real = 1982$)

	Coal		Natural Gas		Heating Oil		Propane		Residual		Commercial Electricity		Industrial Electricity		Gasoline		Diesel	
	$/ton	$/ton	$/ccf	$/ccf	$/gal	$/gal	$/gal	$/gal	$/gal	$/gal	c/KWH	c/KWH	c/KWH	c/KWH	$/gal	$/gal	$/gal	$/gal
Year	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real
1960	32.40	7.26			0.13	0.03	0.12	0.03	0.08	0.02	3.20	0.72	1.30	0.29	0.29	0.06	0.26	0.06
1961	32.57	7.33			0.14	0.03	0.11	0.02	0.08	0.02	3.20	0.72	1.30	0.29	0.29	0.07	0.27	0.06
1962	32.90	7.44			0.13	0.03	0.10	0.02	0.08	0.02	3.10	0.70	1.30	0.29	0.29	0.07	0.26	0.06
1963	33.19	7.50			0.13	0.03	0.10	0.02	0.07	0.02	3.00	0.68	1.30	0.29	0.29	0.07	0.26	0.06
1964	33.48	7.53			0.13	0.03	0.11	0.02	0.07	0.02	2.90	0.65	1.30	0.29	0.30	0.07	0.26	0.06
1965	33.90	7.76			0.14	0.03	0.11	0.03	0.07	0.02	2.80	0.64	1.30	0.30	0.31	0.07	0.27	0.06
1966	34.53	8.05	0.21	0.05	0.14	0.03	0.11	0.03	0.07	0.02	2.70	0.63	1.20	0.28	0.31	0.07	0.27	0.06
1967	35.21	8.38	0.19	0.05	0.15	0.04	0.12	0.03	0.07	0.02	2.70	0.64	1.20	0.29	0.33	0.08	0.28	0.07
1968	36.32	8.79	0.17	0.04	0.15	0.04	0.10	0.02	0.08	0.02	2.60	0.63	1.10	0.27	0.34	0.08	0.28	0.07
1969	37.75	9.36	0.17	0.04	0.15	0.04	0.09	0.02	0.07	0.02	2.60	0.64	1.10	0.27	0.36	0.09	0.28	0.07
1970	39.38	10.04	0.18	0.05	0.16	0.04	0.12	0.03	0.08	0.02	2.60	0.66	1.10	0.28	0.38	0.10	0.29	0.07
1971	40.58	10.75	0.19	0.05	0.17	0.05	0.13	0.03	0.12	0.03	2.60	0.69	1.20	0.32	0.39	0.10	0.30	0.08
1972	38.01	10.34	0.21	0.06	0.17	0.05	0.14	0.04	0.10	0.03	2.70	0.73	1.30	0.35	0.38	0.10	0.30	0.08
1973	38.70	11.38	0.20	0.06	0.20	0.06	0.13	0.04	0.15	0.04	2.80	0.82	1.30	0.38	0.40	0.12	0.33	0.10
1974	44.30	16.88	0.24	0.09	0.34	0.13	0.22	0.08	0.31	0.12	3.20	1.22	1.90	0.72	0.54	0.21	0.47	0.18
1975	68.21	28.72	0.26	0.11	0.40	0.17	0.30	0.13	0.31	0.13	3.70	1.56	2.10	0.88	0.57	0.24	0.53	0.22
1976	87.14	39.30	0.28	0.13	0.41	0.18	0.33	0.15	0.29	0.13	3.60	1.62	1.90	0.86	0.59	0.27	0.54	0.24
1977	79.55	39.30	0.34	0.17	0.46	0.23	0.34	0.17	0.32	0.16	4.00	1.98	2.10	1.04	0.63	0.31	0.59	0.29
1978	70.46	36.99	0.38	0.20	0.46	0.24	0.35	0.18	0.30	0.16	4.10	2.15	2.20	1.16	0.64	0.34	0.59	0.31
1979	81.97	53.85	0.39	0.26	0.65	0.43	0.41	0.27	0.44	0.29	4.90	3.22	2.90	1.91	0.92	0.60	0.78	0.51
1980	93.48	80.39	0.47	0.40	0.92	0.79	0.55	0.47	0.62	0.53	6.20	5.33	4.20	3.61	1.24	1.07	1.05	0.90
1981	72.00	70.34	0.58	0.57	1.13	1.10	0.59	0.58	0.77	0.75	6.90	6.74	4.80	4.69	1.37	1.34	1.31	1.28
1982	78.00	77.38	0.70	0.69	1.11	1.10	0.66	0.65	0.69	0.68	7.20	7.14	4.70	4.66	1.28	1.27	1.25	1.24
1983	85.00	84.92	0.84	0.84	0.96	0.96	0.71	0.71	0.65	0.65	6.50	6.49	4.50	4.50	1.26	1.26	1.22	1.22
1984	85.00	85.77	0.81	0.82	0.97	0.98	0.69	0.70	0.71	0.72	7.30	7.37	5.00	5.05	1.24	1.25	1.28	1.29
1985	80.00	81.28	0.76	0.77	0.90	0.91	0.94	0.96	0.63	0.64	7.80	7.92	5.20	5.28	1.25	1.27	1.26	1.28
1986	80.00	70.56	0.71	0.63	0.64	0.56	1.03	0.91	0.35	0.31	7.80	6.88	4.90	4.32	1.01	0.89	1.04	0.92
1987	80.00	70.88	0.67	0.59	0.63	0.56	1.02	0.90	0.39	0.35	7.10	6.29	4.70	4.16	1.02	0.90	1.07	0.95
1988	82.00	73.23	0.59	0.53	0.61	0.54	1.00	0.89	0.33	0.29	7.30	6.52	5.20	4.64	1.05	0.94	1.06	0.95
1989	84.00	79.21	0.54	0.51	0.72	0.68	0.94	0.89	0.40	0.38	7.34	6.92	5.22	4.92	1.13	1.07	1.12	1.06
1990	65.18	66.55	0.60	0.61	1.00	1.02	0.99	1.01	0.42	0.43	8.00	8.17	5.80	5.92	1.22	1.25	1.26	1.29
1991	66.21	67.87	0.54	0.55	0.97	0.99	1.09	1.12	0.34	0.35	9.10	9.33	6.50	6.66	1.21	1.24	1.26	1.29
1992	66.35	68.34	0.53	0.54	1.05	1.09	0.87	0.90	0.37	0.38	9.40	9.68	6.60	6.80	1.20	1.24	1.20	1.24
1993	57.76	60.19	0.60	0.63	0.73	0.76	0.89	0.93	0.35	0.36	9.70	10.11	6.80	7.09	1.17	1.22	1.19	1.24
1994	55.87	58.44	0.61	0.64	1.14	1.19	0.81	0.85	0.37	0.38	10.40	10.87	7.19	7.52	1.14	1.19	1.14	1.19

Table 7 - Energy Consumption for Electricity Generation

Year	Distillates		Residual		Nuclear		Hydro-Electric		Wood		Total Energy
	TBTU	Million Gallons	TBTU	Million Gallons	TBTU	Million KWH	TBTU	Million KWH	TBTU	1000 Tons	TBTU
1960	0.22	1.58	11.6	77.4			22.5	2,180.6			34.3
1961	0.28	2.04	15.0	99.8			20.6	2,000.6			35.9
1962	0.33	2.34	17.2	114.5			20.4	1,980.3			37.9
1963	0.30	2.16	15.9	105.8			22.6	2,194.3			38.8
1964	0.38	2.75	20.1	134.3			19.8	1,919.2			40.3
1965	0.52	3.75	27.5	183.3			16.7	1,616.7			44.7
1966	0.52	3.72	27.2	181.6			20.6	1,999.1			48.4
1967	0.55	3.99	29.3	195.2			21.3	2,065.8			51.1
1968	0.59	4.29	31.4	209.6			21.6	2,092.2			53.6
1969	0.56	4.05	29.7	198.2			24.9	2,413.0			55.1
1970	0.56	4.01	30.0	199.2			19.7	1,913.0			50.2
1971	1.27	9.13	30.7	205.0			17.0	1,651.0			49.0
1972	1.50	10.84	34.2	227.8	0.586	54.2	18.2	1,769.0			54.5
1973	0.83	5.95	30.6	205.0	36.540	3,383.3	19.1	1,853.0			87.1
1974	0.52	3.71	25.1	167.4	39.893	3,693.8	18.1	1,756.0			83.6
1975	0.24	1.75	17.7	117.9	49.586	4,591.3	18.9	1,832.0			86.4
1976	0.23	1.62	11.7	77.8	65.496	6,064.5	21.5	2,081.0			98.8
1977	0.16	1.12	8.2	54.7	55.386	5,128.3	20.5	1,987.0			84.2
1978	0.16	1.15	11.0	73.0	58.582	5,424.3	19.5	1,887.0			89.1
1979	0.22	1.58	14.0	93.5	48.928	4,530.4	18.3	1,775.0			81.5
1980	0.35	2.55	22.8	151.7	48.040	4,448.2	14.9	1,443.0			86.0
1981	0.23	1.66	23.4	156.1	57.488	5,322.9	18.3	1,775.0			99.4
1982	0.33	2.35	19.8	131.7	50.097	4,638.6	18.5	1,798.0	6.7	644.4	95.4
1983	0.36	2.60	21.7	144.8	62.488	5,785.9	18.8	1,822.0	13.2	1,269.8	116.6
1984	0.25	1.80	22.4	149.0	55.552	5,143.7	19.5	1,895.0	13.7	1,318.6	111.4
1985	0.17	1.19	21.6	143.9	57.897	5,360.9	15.8	1,530.0	14.3	1,370.7	109.7
1986	0.19	1.39	27.4	182.7	67.405	6,241.2	19.5	1,891.0	17.4	1,668.7	131.9
1987	0.20	1.45	27.1	180.9	43.566	4,033.9	17.6	1,704.1	29.6	2,848.2	118.1
1988	0.30	2.13	30.5	203.5	53.900	4,990.7	19.5	1,892.3	35.6	3,426.6	139.9
1989	0.30	2.16	31.6	210.7	74.400	6,888.9	23.2	2,251.8	39.4	3,790.6	168.9
1990	0.11	0.80	22.28	148.6	52.499	4,861.0	27.8	2,698.0	40.8	4,000.0	143.5
1991	0.13	0.92	14.40	96.0	67.651	6,264.0	27.1	2,623.8	40.8	4,000.0	150.0
1992	0.14	1.01	13.94	92.9	57.866	5,358.0	24.2	2,345.9	45.2	4,346.9	141.3
1993	0.09	0.67	8.68	57.8	61.992	5,740.0	22.0	2,131.7	40.0	3,842.0	132.7
1994	0.10	0.76	8.03	53.6	71.626	6,632.0	28.4	2,761.0	40.8	3,926.0	149.0
1995	0.17	1.22	9.21	61.4	2.138	198.0	22.1	2,143.7	40.8	3,926.0	74.4

TABLE 8 - Maine Energy Consumption by Major Fuel Type: Natural Units

Year	Coal Thous. Tons	Natural Gas Mil Cubic Ft	Heating Oil Mil Gals	Kerosene Mil Gals	Propane Mil Gals	Residual Mil Gals	Diesel Mil Gals	Gasoline Mil Gals	Total Oil Mil Brls	Total Oil Mil Gals	Wood Thous Tons	Nuclear Mil KWH	Hydro-Electric Mil KWH	Electricity Mil KWH
1960	795.5		257.3	95.6	19.3	149.3	52.6	360.3	22.2	934.3	550.2		3,127.0	2,782.0
1961	785.9		301.8	118.9	21.2	106.5	44.5	356.4	22.6	949.3	567.0		2,883.3	2,937.1
1962	718.4		319.7	105.3	23.8	59.6	40.6	359.9	21.6	908.8	583.8		2,816.6	3,121.4
1963	505.6		344.7	113.0	27.5	58.7	48.2	365.6	22.8	957.8	600.7		3,145.0	3,229.7
1964	325.7		313.0	89.7	30.1	136.2	52.9	369.7	23.6	991.6	617.5		2,753.2	3,424.4
1965	322.2		333.1	85.6	24.1	56.3	50.4	383.7	22.2	933.1	634.3		2,324.1	3,758.1
1966	298.4	514.1	313.4	73.1	26.3	94.3	54.4	395.8	22.8	957.3	673.6		2,750.5	3,936.0
1967	226.6	752.4	371.9	98.6	25.5	108.4	40.5	404.0	25.0	1,048.8	713.0		2,923.1	4,004.1
1968	185.3	796.6	389.9	95.1	25.4	111.2	52.5	427.4	26.2	1,101.4	750.4		3,004.2	4,459.4
1969	172.4	1,109.7	413.9	93.9	27.9	170.8	60.1	438.9	28.7	1,205.5	786.0		3,271.0	4,805.9
1970	87.3	1,280.9	434.3	74.3	26.3	286.6	58.2	470.7	32.2	1,350.5	821.5		3,209.0	5,068.1
1971	92.9	1,437.5	437.5	75.1	26.2	580.5	62.9	489.6	39.8	1,671.9	904.0		2,815.0	5,317.4
1972	56.6	1,487.3	462.2	74.8	31.6	656.8	69.2	514.5	43.1	1,809.2	967.7	54.2	3,031.0	5,826.7
1973	57.2	1,621.3	449.1	54.8	32.0	622.8	69.7	530.1	41.9	1,758.5	1,022.0	3,383.3	3,219.0	6,132.2
1974	79.0	1,594.7	434.4	46.5	32.4	465.7	66.5	525.5	37.4	1,570.9	1,149.4	3,693.8	3,065.0	6,414.8
1975	52.9	1,931.8	417.4	43.2	39.1	365.0	64.0	536.4	34.9	1,465.2	1,241.2	4,591.3	3,079.0	6,532.3
1976	42.4	2,037.1	493.4	55.9	46.6	454.6	76.3	563.0	40.2	1,689.7	1,379.3	6,064.5	3,546.0	7,121.2
1977	24.3	1,997.1	540.0	44.5	48.5	455.3	80.7	571.5	41.4	1,740.3	1,493.1	5,128.3	3,460.0	7,571.3
1978	29.0	2,117.0	490.0	32.9	44.1	365.1	82.9	578.7	37.9	1,593.8	1,554.7	5,424.3	3,199.0	7,977.0
1979	31.4	2,113.3	402.1	25.2	68.8	341.1	76.7	527.7	34.3	1,441.6	1,718.7	4,530.4	3,176.0	8,072.0
1980	121.7	2,161.4	376.9	21.1	35.2	207.0	66.9	499.7	28.7	1,206.8	2,280.5	4,448.2	2,617.0	8,185.0
1981	126.9	2,324.3	323.8	12.1	28.4	262.2	63.0	490.1	28.1	1,179.6	2,981.9	5,322.9	3,288.0	8,239.5
1982	280.5	2,617.9	305.4	13.1	33.1	247.0	77.1	500.9	28.0	1,176.6	4,009.2	4,638.6	3,485.0	8,726.6
1983	238.4	2,420.7	221.7	14.7	33.4	208.1	81.1	512.0	25.5	1,071.0	4,294.5	5,785.9	3,251.0	9,436.6
1984	200.2	2,464.2	227.3	13.7	21.7	201.9	113.1	536.9	26.5	1,114.7	4,329.1	5,143.7	3,573.0	9,622.7
1985	205.9	2,548.2	264.8	19.7	25.0	210.4	118.3	558.0	28.5	1,196.2	4,397.3	5,360.9	2,698.0	9,824.3
1986	375.9	2,479.3	327.6	14.1	40.4	225.2	131.7	591.9	31.7	1,330.9	4,620.0	6,241.2	3,275.0	10,203.0
1987	277.0	2,671.2	330.3	16.9	48.9	264.1	145.5	616.9	33.9	1,422.7	6,088.0	4,033.9	2,725.2	10,718.2
1988	279.5	3,131.6	377.7	19.2	65.2	269.6	116.6	667.5	36.1	1,515.8	5,921.9	4,990.7	2,825.2	11,263.8
1989	275.2	3,535.2	351.9	19.1	64.6	323.7	123.6	637.9	36.2	1,520.8	6,193.1	6,888.9	3,354.9	11,436.4
1990	265.0	4,226.4	311.7	27.6	58.4	246.5	111.4	620.1	32.8	1,375.7	7,120.0	4,861.0	3,913.1	11,529.0
1991	374.0	4,726.2	309.6	31.2	62.0	258.8	106.7	616.5	33.0	1,384.9	7,380.2	6,264.0	4,051.3	11,383.0
1992	856.0	5,029.6	325.8	23.4	51.6	312.1	114.3	619.1	34.4	1,446.2	8,044.6	5,358.0	3,573.1	11,483.0
1993	449.0	4,883.0	388.1	40.4	57.0	334.6	115.1	626.0	37.2	1,561.3	5,918.9	5,739.9	3,336.8	11,952.0
1994	464.0	4,980.7	393.3	41.3	57.3	429.1	129.5	630.9	40.0	1,681.4	5,868.2	6,632.0	3,831.0	11,606.0
1995	281.0	5,273.6	452.1	53.7	63.9	338.7	130.7	617.8	39.4	1,656.8	5,868.2	198.0	3,321.6	11,561.0

Table 9 - Maine Energy Consumption by Major Fuel Type: Trillion BTU's

Year	Coal	Natural Gas	Heating Oil	Kerosene	Propane	Residual	Diesel	Gasoline	Total Oil	Wood	Nuclear	Hydro-Electric	Total Energy
1960	5.1		35.7	13.0	1.8	36.6	7.3	44.0	138.3	7.2		32.2	182.8
1961	19.3		41.9	16.2	1.9	33.2	6.2	44.6	143.8	7.4		29.7	200.2
1962	17.6		44.3	14.3	2.2	24.8	5.6	45.0	136.3	7.7		29.0	190.5
1963	12.4		47.8	15.4	2.5	29.0	6.7	45.7	147.0	7.9		32.4	199.7
1964	8.0		43.4	12.2	2.8	47.9	7.3	46.2	159.8	8.1		28.4	204.2
1965	7.9		46.2	11.6	2.2	35.7	7.0	48.0	150.7	8.3		23.9	190.8
1966	7.3	0.5	43.5	9.9	2.4	43.4	7.6	49.5	156.3	8.7		28.3	201.1
1967	5.6	0.8	51.6	13.4	2.3	47.7	5.6	50.5	171.1	9.1		30.1	216.7
1968	4.5	0.8	54.1	12.9	2.3	46.4	7.3	53.4	176.4	9.6		30.9	222.3
1969	4.2	1.1	57.4	12.8	2.6	55.6	8.3	54.9	191.5	9.9		33.7	240.5
1970	2.1	1.3	60.2	10.1	2.4	72.3	8.1	57.9	211.0	9.3		33.1	256.8
1971	2.3	1.5	60.7	10.2	2.4	119.5	8.7	60.4	262.0	11.2		29.0	306.0
1972	1.4	1.6	64.1	10.2	2.9	125.6	9.6	63.6	275.9	11.9	0.6	31.2	322.6
1973	1.4	1.7	62.3	7.5	2.9	114.8	9.7	65.6	262.8	12.5	36.5	33.2	348.1
1974	2.0	1.6	60.2	6.3	3.0	85.8	9.2	65.1	229.7	13.9	39.9	31.6	318.6
1975	1.3	2.0	57.9	5.9	3.6	65.4	8.9	66.4	208.1	14.9	49.6	31.7	307.6
1976	1.1	2.1	68.4	7.6	4.3	75.4	10.6	69.8	236.1	16.6	65.5	36.5	357.9
1977	0.6	2.1	74.9	6.1	4.4	78.7	11.2	70.9	246.1	18.2	55.4	35.6	357.9
1978	0.7	2.2	68.0	4.5	4.0	68.5	11.5	71.8	228.2	18.9	58.6	32.9	341.6
1979	0.8	2.2	55.8	3.4	6.3	73.1	10.6	65.4	214.6	21.2	48.9	32.7	320.4
1980	3.0	2.2	52.3	2.9	3.2	54.2	9.3	61.8	183.7	27.3	48.0	27.0	291.2
1981	3.1	2.4	44.9	1.7	2.6	58.4	8.7	60.8	177.1	43.2	57.5	33.9	317.1
1982	6.9	2.7	42.4	1.8	3.1	58.1	10.7	62.0	178.0	53.8	50.1	35.9	327.3
1983	5.8	2.5	30.7	2.0	3.1	53.6	11.7	63.5	164.6	51.2	62.5	33.5	320.0
1984	4.9	2.5	31.5	1.9	2.0	51.9	15.7	66.4	169.3	51.0	55.6	36.8	320.1
1985	5.0	2.6	36.7	2.7	2.3	58.9	16.4	68.5	185.6	54.5	57.9	27.8	333.4
1986	9.2	2.5	45.4	1.9	3.7	60.8	18.3	72.8	202.9	65.3	67.4	33.7	381.1
1987	6.8	2.7	45.8	2.3	4.5	70.1	20.2	75.9	218.8	74.3	43.6	28.1	374.2
1988	6.8	3.2	52.4	2.6	6.0	71.6	16.2	82.3	231.0	69.6	53.9	29.1	393.6
1989	6.7	3.6	48.8	2.6	5.8	70.6	17.1	78.5	223.4	69.6	74.4	34.6	412.4
1990	6.6	4.3	43.2	3.8	5.1	51.1	15.4	76.4	195.1	70.4	52.5	40.3	369.1
1991	9.3	4.8	42.9	4.2	5.4	52.6	14.8	76.0	195.9	76.5	67.7	41.7	395.9
1992	21.5	5.2	45.2	3.2	4.5	55.3	15.9	76.6	200.6	74.3	57.9	36.8	396.2
1993	11.3	5.0	53.8	5.5	4.9	57.8	16.0	77.2	215.2	62.9	61.3	34.4	390.1
1994	11.6	5.1	54.5	5.6	5.0	73.2	18.0	77.9	234.3	63.3	70.8	39.5	424.5
1995	6.9	5.4	62.7	7.3	5.8	50.8	18.1	77.2	222.0	61.0	21.4	34.2	350.9

Table 10 - Additional Maine Data

Year	Population	Households	Registered Vehicles	Vehicle Miles Travelled	Gross State Product (millions of nominal dollars)	Total Personal Income (millions of nominal dollars)	Implicit Price Deflator (1992 dollars)	Real Gross State Product (millions of 1992 dollars)	Real Total Personal Income (millions of 1992 dollars)
1960	969,000	280,355				$1,852	23.27		
1961	995,000	282,630				$1,873	23.54		
1962	994,000	284,905				$1,949	23.84		
1963	993,000	287,180			$2,401	$2,014	24.12	$9,954	$8,350
1964	993,000	289,455			$2,583	$2,174	24.48	$10,551	$8,881
1965	997,000	291,730			$2,769	$2,357	24.96	$11,094	$9,443
1966	999,000	294,005			$2,976	$2,522	25.67	$11,593	$9,825
1967	1,004,000	296,280			$3,128	$2,653	26.49	$11,808	$10,015
1968	994,000	298,555			$3,344	$2,839	27.64	$12,098	$10,271
1969	992,000	300,830			$3,654	$3,104	28.94	$12,626	$10,726
1970	994,000	303,104			$3,887	$3,390	30.48	$12,753	$11,122
1971	1,015,000	311,884			$4,149	$3,628	32.06	$12,941	$11,316
1972	1,034,000	320,664			$4,584	$3,965	33.42	$13,716	$11,864
1973	1,046,000	329,444			$5,150	$4,479	35.30	$14,589	$12,688
1974	1,059,000	338,224			$5,575	$4,980	38.47	$14,492	$12,945
1975	1,072,000	347,000			$5,857	$5,310	42.09	$13,915	$12,616
1976	1,088,000	356,000			$6,811	$6,118	44.55	$15,288	$13,733
1977	1,104,000	363,000			$7,547	$6,657	47.43	$15,912	$14,035
1978	1,114,000	371,000		7,972,000,000	$8,362	$7,376	50.89	$16,432	$14,494
1979	1,123,000	383,000		7,112,000,000	$9,223	$8,241	55.23	$16,699	$14,921
1980	1,125,000	395,184		7,465,000,000	$10,135	$9,266	60.33	$16,799	$15,359
1981	1,133,000	403,356		7,587,000,000	$11,083	$10,258	66.01	$16,790	$15,540
1982	1,137,000	405,979		7,649,000,000	$12,053	$10,973	70.17	$17,177	$15,638
1983	1,145,000	410,002	774,096	7,929,000,000	$12,988	$11,876	73.16	$17,753	$16,233
1984	1,157,000	419,895	847,922	9,345,000,000	$14,753	$13,159	75.92	$19,432	$17,333
1985	1,164,000	427,004	833,549	9,421,848,002	$15,870	$14,169	78.53	$20,209	$18,043
1986	1,172,000	432,966	843,248	9,921,469,681	$17,333	$15,516	80.58	$21,510	$19,255
1987	1,186,000	441,920	906,976	10,646,303,360	$19,300	$16,906	83.06	$23,236	$20,354
1988	1,206,000	453,142	969,976	11,266,038,089	$21,369	$18,486	86.09	$24,822	$21,473
1989	1,216,964	461,878	1,021,296	11,626,294,504	$22,838	$20,089	89.72	$25,455	$22,391
1990	1,231,252	465,312	1,032,706	11,737,406,022	$23,233	$20,981	93.60	$24,822	$22,416
1991	1,234,880	470,207	1,052,185	11,734,689,655	$23,247	$21,399	97.32	$23,887	$21,988
1992	1,234,973	473,619	1,037,170	11,992,428,306	$24,013	$22,374	100.00	$24,013	$22,374
1993	1,236,619	473,855	1,045,626	12,058,139,259	$25,069	$23,168	102.64	$24,424	$22,572
1994	1,235,741	472,952	1,053,561	12,469,000,000	$26,069	$24,162	105.09	$24,806	$22,992
1995	1,234,115	477,190	1,060,059	12,589,000			107.76		$0
1996	1,238,566	482,945					110.21		$0
1997	1,242,051						112.40		$0

Table 11 Conversion Factors

Energy Resource	Unit	Heat Content MMBTU/Unit	Unit/MMBTU	KBTU/lb	Unit/lb
Propane	gal	0.0915	10.93	19.7	0.215
Gasoline	gal	0.125	8	20.1	0.1608
Kerosene	gal	0.136	7.35	19.76	0.1453
Diesel	gal	0.13869	7.21	19.46	0.1403
Distillate(#2)	gal	0.13869	7.21	19.46	0.1403
Residual(#6)	gal	0.15	6.67	19	0.1269
Wood					
Industrial	tons	10.4	0.096	5.2	0.0005
	cord	19.5	0.051		
residential	tons	14.1	0.071	7.05	0.0005
	cord	21	0.048		
Coal					
Industrial	tons	24.5	0.041	12.25	0.0005
commercial	tons	24	0.042	12	0.0005
residential	tons	25	0.04	12.5	0.0005
Municipal Solid Waste	tons	10.16	0.098	5.08	0.0005
Natural Gas	ccf	0.1024	9.766	22.9	0.2236
Electricity	MWH	3.412			
Nuclear Power	MWH	10.8			
Hydro-electric power	MWH	10.3			

Gallons to Barrels conversion		0.042

#2 OIL CONV	K:C8..K:C8	0.13869
#6 OIL CONV	K:C9..K:C9	0.15
DIESEL CONV	K:C7..K:C7	0.13869
GALS-BARRELS	K:C26..K:C26	0.042
GAS CONV	K:C5..K:C5	0.125
KEROSENE CONV	K:C6..K:C6	0.136
NAT-GAS CONV	K:D20..K:D20	9.766
PROPANE CONV	K:C4..K:C4	0.0915
RESI-COAL HEAT	K:C18..K:C18	25

INVENTORY OF 1994 ELECTRIC CAPACITY AND GENERATION

Project/Facility Name	Location	Utility	Owner	Type	MW's	MWH's (1994)
Albert R. Lavalley	York	CMP	IND	Biomass	1.25	2,566.1
Babcock-Ultrapower/ W Enfield	Penobscot	BHE	IND	Biomass	16.50	19,329.6
Babcock-Ultrapower/ Jonesboro	Washington	BHE	IND	Biomass	16.50	24,115.4
Beaverwood Joint Venture	Penobscot	BHE	IND	Biomass	11.40	90,465.4
Dirigo Dowels	Somerset	CMP	IND	Biomass	0.30	1,188.0
Downeast Peat	Washington	23 MW Export	IND	Biomass	23	
Fairfield Energy Venture	Aroostook	MPS	IND	Biomass	0.00	210.3
Fairfield Energy Venture	Aroostook	CMP	IND	Biomass	32.00	241,781.9
Forster Mfg/ Mattawamkeag	Penobscot	BHE	IND	Biomass	1.00	638.7
Forster Mfg/ Strong	Franklin	CMP	IND	Bioamss	1.25	3,041.6
Gorbell-Thermo Electron	Somerset	CMP	IND	Biomass	13.80	88,134.9
Greenville/ Swift River	Piscataquis	CMP	IND	Biomass	13.80	76,426.0
Lewiston Steam And Power (LFC)	Androscoggin	CMP	IND	Biomass	11.80	62,524.7
Robbins Lumber	Waldo	CMP	IND	Biomass	1.20	3,586.2
Stratton Energy Associates	Franklin	CMP	IND	Biomass	36.80	296,555.2
Wheelabrator-Sherman	Penobscot	MPS	IND	Biomass	16.50	124,699.0
Boise Cascade	Oxford	CMP	IND	Biomass/Multi	75.00	589,716.1
Champion Cogenerating	Hancock	CMP	IND	Biomass/Multi	32.70	196,025.6
Georgia Pacific/E. Millinocket(GNP)	Washington	BHE	IND	Biomass/Multi	20.00	36,925.4
Scott Paper (S D W/Somerset)	Somerset	CMP	IND	Biomass/Multi	87.00	583,647.5
Scott Paper(S D W/ Westbrook)	Cumberland	CMP	IND	Biomass/Multi	62.50	511,020.1
Scott Paper/ Winslow	Kennebec	CMP	IND	Biomass/Multi	18.80	144,833.5
James River Corp.	Penobscot	BHE	IND	Biomass/Multi		156.0
Biomass Total					470.1	3,097,587.1
Canadian Imports	Canada	BHE	IMP	Can. Import	24.00	121,670.4
Canadian Imports	Canada	COOP	IMP	Can. Import	0.00	42,247.0
Canadian Imports	Canada	MPS	IMP	Can. Import	27.40	225,370.0
Canadian Imports	Canada	CMP	IMP	Can. import	150.00	321,733.7
Total Canadian Imports					201.4	711,021.1
Ellsworth	Hancock	BHE	BHE	Hydro	9.20	31,244.3
Howland	Penobscot	BHE	BHE	Hydro	1.88	8,236.4
Medway	Penobscot	BHE	BHE	Hydro	3.44	30,410.1
Milford	Penobscot	BHE	BHE	Hydro	6.40	41,936.4
Orono	Penobscot	BHE	BHE	Hydro	2.33	12,453.4
Stillwater	Penobscot	BHE	BHE	Hydro	1.95	12,093.3
Veazie	Penobscot	BHE	BHE	Hydro	8.40	60,678.3
Bangor Hydro-Pacific/ W Enfield	Penobscot	BHE	IND	Hydro	13.00	102,184.5
ESI/ Milo Hydro	Piscataquis	BHE	IND	Hydro	0.66	2,499.6
Green Lake	Hancock	BHE	IND	Hydro	0.40	1,997.3
Maine Energy Partners	Penobscot	BHE	IND	Hydro	0.30	790.2

Pumpkin Hill Hydro	Penobscot	BHE	IND	Hydro	0.85	5,267.7
Sebec	Piscataquis	BHE	IND	Hydro	0.90	3,198.3
Androscoggin 3	Androscoggin	CMP	CMP	Hydro	3.60	25,290.5
Androscoggin Mill Lower	Androscoggin	CMP	CMP	Hydro	0.30	103.6
Androscoggin Mill Upper	Androscoggin	CMP	CMP	Hydro	2.40	997.2
Bar Mills	York	CMP	CMP	Hydro	4.00	24,283.1
Bates Mill Lower	Androscoggin	CMP	CMP	Hydro	0.50	364.2
Bates Mill Upper	Androscoggin	CMP	CMP	Hydro	3.90	5,773.5
Bonny Eagle	York	CMP	CMP	Hydro	7.20	55,896.8
Brunswick	Cumberland	CMP	CMP	Hydro	19.60	105,694.2
Cataract	York	CMP	CMP	Hydro	6.65	31,269.5
Cataract W Channel	York	CMP	CMP	Hydro	1.04	108.7
Continental Mills	Androscoggin	CMP	CMP	Hydro	1.58	2,750.2
Deer Rips	Androscoggin	CMP	CMP	Hydro	7.15	28,332.4
Fort Halifax/ Sebasticook #4	Kennebec	CMP	CMP	Hydro	1.50	8,014.5
Gulf Island	Androscoggin	CMP	CMP	Hydro	22.20	142,659.2
Harris	Somerset	CMP	CMP	Hydro	76.40	238,653.1
Hill Mill	Androscoggin	CMP	CMP	Hydro	2.16	600.0
Hiram	Oxford	CMP	CMP	Hydro	10.50	60,481.5
Messalonskee 2	Kennebec	CMP	CMP	Hydro	2.80	9,337.3
Messalonskee 3	Kennebec	CMP	CMP	Hydro	1.60	5,880.1
Messalonskee 4	Kennebec	CMP	CMP	Hydro	0.80	3,084.7
Messalonskee 5	Kennebec	CMP	CMP	Hydro	1.50	5,427.6
Monty	Androscoggin	CMP	CMP	Hydro	28.44	143,167.5
North Gorham	Cumberland	CMP	CMP	Hydro	2.25	10,707.1
Shawmut	Somerset	CMP	CMP	Hydro	8.65	61,585.9
Skelton	York	CMP	CMP	Hydro	16.80	114,792.6
West Buxton	York	CMP	CMP	Hydro	7.92	40,645.3
Weston	Somerset	CMP	CMP	Hydro	12.00	94,363.9
Williams	Somerset	CMP	CMP	Hydro	13.00	105,249.0
Wyman	Somerset	CMP	CMP	Hydro	72.00	393,437.4
Abbotts Mills	Oxford	CMP	IND	Hydro	0.10	177.3
Androscoggin WP/ Pejepscot Paper	Sagadahoc	CMP	IND	Hydro	13.88	76,035.0
Benton Falls	Kennebec	CMP	IND	Hydro	3.20	17,688.0
Bisco Falls	Oxford	CMP	IND	Hydro	0.08	104.5
Brassua	Somerset	CMP	IND	Hydro	3.13	20,534.6
City of Lewiston	Androscoggin	CMP	IND	Hydro	1.70	3,128.0
Consol Hydro/ Aziscohos	Oxford	CMP	IND	Hydro	5.46	39,428.5
Consol Hydro/ Damariscotta Hydro	Lincoln	CMP	IND	Hydro	0.55	2,336.0
Consol Hydro/ Eustis Hydro	Franklin	CMP	IND	Hydro	0.31	976.1
Consol Hydro/ Gardiner Hydro	Kennebec	CMP	IND	Hydro	1.15	5,812.2
Consol Hydro/ Greenville Hydro	Piscataquis	CMP	IND	Hydro	0.72	2,972.1
Consol Hydro/ Hydro Gen-Brown's Mill	Piscataquis	CMP	IND	Hydro	0.60	3,176.7

Consol Hydro/ Lower Barker Mill	Androscoggin	CMP	IND	Hydro	1.60	8,014.8
Consol Hydro/ Mechanic Falls	Androscoggin	CMP	IND	Hydro	0.96	4,326.7
Consol Hydro/ Norway	Oxford	CMP	IND	Hydro	0.35	799.1
Consol Hydro/ Pittsfield	Somerset	CMP	IND	Hydro	0.98	5,889.4
Consol Hydro/ S Berwick-Great Works	York	CMP	IND	Hydro	0.50	1,547.4
Consol Hydro/ Upper Barker Mill	Androscoggin	CMP	IND	Hydro	0.95	6,721.8
Consol Hydro/ York Hydro	York	CMP	IND	Hydro	0.98	5,557.8
Express Energy/ Quinn Hydrotech	Waldo	CMP	IND	Hydro	0.40	573.9
Express Energy/ Waverly Ave	Somerset	CMP	IND	Hydro	0.40	1,094.6
Foss Mill/ P. Graham	Waldo	CMP	IND	Hydro	0.02	17.7
Gardiner Brook	Oxford	CMP	IND	Hydro	0.05	261.8
Gilman Stream/ N. New Portland	Somerset	CMP	IND	Hydro	0.10	272.8
Goose River/ Maine Hydro Devel	Waldo	CMP	IND	Hydro	0.36	1,761.7
H S Hawkins/ Meguntacook Hydro	Knox	CMP	IND	Hydro	0.02	37.0
Hackett Mills	Androscoggin	CMP	IND	Hydro	0.50	2,178.9
Hydro Kennebec/ United American	Kennebec	CMP	IND	Hydro	17.15	96,580.0
International Paper/ Androscoggin	Franklin	CMP	IND	Hydro	0.00	84.3
International Paper/ Otis Dam	Oxford	CMP	IND	Hydro	10.00	54,565.0
International Paper/ Riley Dam	Oxford	CMP	IND	Hydro	7.80	32,440.8
Kennebago	Franklin	CMP	IND	Hydro	0.70	659.4
Lockwood/ Milstar Merimil	Kennebec	CMP	IND	Hydro	6.55	48,903.3
M. Vaughn/ Starks Mill	Somerset	CMP	IND	Hydro	0.05	80.5
M. Vaughn/ Upper Spears Stream	Oxford	CMP	IND	Hydro	0.05	106.7
Madison Paper/ Abenaki	Somerset	CMP	IND	Hydro	8.41	65,058.0
Madison Paper/ Anson	Somerset	CMP	IND	Hydro	6.77	46,601.9
Marsh Stream/ John Jones	Waldo	CMP	IND	Hydro	0.09	289.6
Miller Hydro/ Edwards Mfg	Kennebec	CMP	IND	Hydro	3.50	25,500.2
Miller Hydro/ Worumbo	Androscoggin	CMP	IND	Hydro	14.00	90,310.7
Moosehead Energy Inc	Piscataquis	CMP	IND	Hydro	0.00	224.9
Morgan's Mills	Knox	CMP	IND	Hydo	0.03	19.6
Murray W Thurston, Mill	Oxford	CMP	IND	Hydro	0.26	844.8
New Mills/ Gardiner Water Dist	Kennebec	CMP	IND	Hydro	0.13	273.5
Ols Sparhawk	Cumberland	CMP	IND	Hydro	0.27	957.2
Pioneer Dam/ Chris Anthony	Somerset	CMP	IND	Hydro	0.20	862.7
Rocky Gorge	York	CMP	IND	Hydro	0.55	2,338.4
Rumford Falls Power I	Oxford	CMP	IND	Hydro	0.00	1,204.1
Seabright	Knox	CMP	IND	Hydro	0.10	402.0
Sevey	Somerset	CMP	IND	Hydro	0.01	10.1
Small Hydro East/ Stony Brook	Oxford	CMP	IND	Hydro	0.03	147.5
Small Hydro East/ Wight Brook	Oxford	CMP	IND	Hydro	0.03	177.6
Smelt Hill/ Cumberland Power	Cumberland	CMP	IND	Hydro	1.20	5,266.2
Smith Group/ Kezar Falls	York	CMP	IND	Hydro	0.80	5,673.5
Smith Group/ Ledgmore	York	CMP	IND	Hydro	0.40	2,478.9

Smith Group/ Windham	Cumberland	CMP	IND	Hydro	0.03	73.5
Whispering Valley Enterprises	Oxford	CMP	IND	Hydro	0.08	4.6
White's Brook	Oxford	CMP	IND	Hydro	0.06	237.6
Kennebunk Hydro (three units)	York	COOP	KLP	Hydro	0.60	27,347.0
Norridgewock	Somerset	COOP	TOM	Hydro	0.38	2,317.2
Caribou	Aroostock	MPS	MPS	Hydro	0.80	5,296.2
Squa Pan	Aroostock	MPS	MPS	Hydro	1.50	1,071.3
Total Hydro					509.72	2,761,773.8
P E R C	Penobscot	BHE	IND	MSW	17.00	123,029.1
Regional Waste System	Cumberland	CMP	IND	MSW	12.98	81,399.8
M E R C	Cumberland	CMP	IND	MSW	19.47	162,472.7
Total MSW					49.45	366,901.7
Connecticut Yankee	Connecticut	CMP	CYAPC	Nuclear	36.02	146,931.6
Eastern Utilities	New Hampshire	BHE	PSNH	Nuclear	50.00	58,669.0
Eastern Utilities	New Hampshire	CMP	PSNH	Nuclear	0.00	103,484.4
Maine Yankee	Lincoln	BHE	MYAP	Nuclear	60.72	430,879.4
Maine Yankee	Lincoln	MPS	MYAP	Nuclear	43.86	307,769.2
Maine Yankee	Lincoln	CMP	MYAP	Nuclear	222.36	2,339,055.7
Maine Yankee	Lincoln	COOP	MYAP	Nuclear	3.50	244,448.0
Maine Yankee	Lincoln	COOP	MYAP	Nuclear	2.75	17,545.6
Millstone #3	Connecticut	CMP	NNEC	Nuclear	31.33	71,715.4
Point Lepreau	Canada	COOP	IMP	Nuclear	2.60	25,282.0
Vermont Yankee	Vermont	CMP	VYNPC	Nuclear	20.22	146,931.6
Central Vermont	Connecticut	BHE	CVPS/NU	Nuclear	50	25,647.7
Total Nuclear					634.36	3,918,359.6
Alco Peaking Unit	York	COOP	KLP	Oil #2	1.00	166.2
Bar Harbor	Hancock	BHE	BHE	Oil #2	8.00	1,038.9
Cape Gas Turbine	Cumberland	CMP	CMP	Oil #2	35.11	5.9
Caribou	Aroostook	MPS	MPS	Oil #2	7.10	0.0
Caribou	Aroostook	MPS	MPS	Oil #6	19.00	8,409.2
Caterpillar Generator	Somerset	COOP	TOM	Oil #2	1.25	176.0
E M Graham Station	Penobscot	BHE	BHE	Oil #6	57.54	16,544.4
Eastern Utilities	Massachusetts	BHE	EUA	Oil #6	30.00	34,689.0
Eastport	Washington	BHE	BHE	Oil #6	4.00	454.6
Flos Inn	Aroostook	MPS	MPS	Oil #2	6.00	0.0
Houlton	Aroostook	MPS	MPS	Oil #2	1.00	0.0
Isleboro	Waldo	CMP	CMP	Oil #2	0.25	0.0
Mason Stream	Lincoln	CMP	CMP	Oil #6	106.50	195.5
Medway	Penobscot	BHE	BHE	Oil #2	8.00	864.5
Minturn	Hancock	COOP	SIEC	Oil #2	0.35	0.0
Peaks Island Diesel	Cumberland	CMP	CMP	Oil #2	1.23	15.1
Portable	Washington	COOP	EMEC	Oil #2	0.30	0.0
Presque Isle Nursing Home	Aroostook	MPS	IND	LPG	0.60	7.4

River Street	Washington	COOP	EMEC	Oil #2	2.20	0.0
Sebasticook Valley Health Care	Somerset	CMP	IND	Oil #2	0.03	0.2
W F Wyman 1,2,3	Cumberland	CMP	CMP	Oil #6	213.64	648,363.3
W F Wyman 4	Cumberland	BHE	BHE/CMP	Oil $6	41.60	43,197.7
W F Wyman 4	Cumberland	CMP	CMP	Oil #6	374.09	350,360.3
W F Wyman 4	Cumberland	MPS	CMP	Oil #6	20.72	20,448.7
Eastern Fine Paper	Penobscot	BHE	IND	Oil #6	4	1.4
Total Oil					943.51	1,124,948.3
Loring Air Force Base	Aroostook	MPS	IND	Other (Coal)	4.00	0.0
Walter Fournier	Aroostook	MPS	IND	Other (Wind)	0.01	0.0
Miscellaneous Wind Power	Maine	CMP	IND	Other (Wind)	0.05	15.8
Northeast Utilities	Massachusetts	CMP	NEU	Other	0.00	0.0
Boston Edison	Massachusetts	CMP	BEC	Other	0.00	0.0
Gene Aho	Aroostook	MPS	IND	Other (Wind)	0.01	0.0
Kenneth Plourde	Aroostook	MPS	IND	Other (Wind)	0.01	0.0
Public Service of N H	New Hampshire	CMP	PSNH	Other	0.00	8.4
United Illuminating	Connecticut	BHE	UI	Other	0.00	25,282.8
NEPOOL	New England	BHE	Pool	Other		321,112.7
CMP	Maine	BHE	CMP	Other		955.0
Total Other					4.08	347,374.7

Footnotes

Table 1

Data for all energy resources, except wood is from the most current "State Energy Data Report" published by the U.S. Department of Energy. Wood data for 1960-1970 is from the 1982 Maine Energy Resources Plan. 1970-1983 data is from the 1987 Maine Energy Resources Plan. 1984-1989 wood data is from the "Residential Energy Use in Maine" report released by the Office of Energy Resources (OER), July, 1989. 1990 to present data are estimates by the State Planning Office. Fuel wood use estimates since 1991 (inclusive) have been adjusted to reflect changes in US Census estimates of the number of households.

Table 2

Data for all categories is from the 1987 Maine Energy Resources Plan. For the years 1960-1970, data is from the 1982 Maine Energy Resources Plan. Wood data for the years 1983-1988 is from the "Residential Energy Use in Maine" report released by the Office of Energy Resources (OER), July, 1989. 1990 to present data are estimates by the State Planning Office. Electricity data for the years 1987-1989 is from the CMP, BHE, and MPS 1989 annual reports.

Table 4

Wood Data derived from prior energy resources plans and DEP "Annual Fuel Usage Report". Wood data excludes estimated industrial sector consumption used to generate electricity for sale to utilities. KWH for hydro represents electric generation (output). TBTUs represented estimated value of energy input. Residual oil consumption data for 1987-1989 from National Emissions Data System as reported by Maine DEP.

Table 5

Data for all energy resources from the most current DOE "State Energy Data Report" and the Maine DOT. Motor Gasoline and Diesel data from Maine DOT. Total energy column does not include jet fuel.

Table 6

Price data for 1970-1986 is from the 1987 Maine Energy Resources Plan. Between 1960-1970, the data is from the 1982 Maine Energy Resources Plan. Propane data is from the most current DOE/EIA "State Price and Expenditure Report." Diesel and gasoline prices for 1987-1989 were updated from the State Planning Office's weekly surveys. Electricity prices were updated with data from CMP's, BHE's, and MPS's annual reports. All other categories were updated with estimates based on information published in the most current DOE/EIA Price report.

Table 7

Consumption estimates for energy consumed to generate electricity instate, exclusive of electricity imports or exports. Wood estimates include consumption by industrial and stand-alone power plants to produce electricity for sale to utilities, and exclude wood fuels used for self-generation. (Estimated wood consumption for self-generation and other power by industrial plants is included in the Industrial Sector Table). KWH data for hydroelectric and nuclear power is calculated from recorded electricity generation. TBTU data represents estimated energy input to generate electricity in Maine. Hydroelectric data for the years 1987 to present is from the State Planning Office.

Table 8

KWH data for hydroelectric and nuclear power is recorded electricity generation (output). Gasoline includes aviation fuel, but Total Oil excludes jet fuel.

Table 9

TBTU data for nuclear and hydro represents estimated value of energy inputs. Gasoline includes aviation fuel, while Total Oil excludes jet fuel.

Table 10

Sources: Gross Domestic Product (GDP) Implicit Price Deflator schedule from "Survey of Current Business", US DOC Bureau of Economic Analysis (March 1998). Gross State Product as published by US DOC Bureau of Economic Analysis (June 1997). Other data except Registered Vehicles and VMT from State Planning Office. Other data from Secretary of States Office or Maine DOT.

Table 11

Wood factors reflect an even mix of hard and soft wood consumed in Maine. It is assumed that the utility and industrial sectors consumed green wood and the residential sector consumed air dried wood. Green = 40 percent moisture content. Air Dry = 20 percent moisture content.

Heat factors for coal are based on these assumptions: industrial consumption is an even mix between anthracite and bituminous; commercial is bituminous; and residential is anthracite.

Sources: "1988 State Energy Data Report", "Mark's Standard Handbook for Engineers"; EIA's "Coal Data: A Reference," Washington State Energy Office, "National Energy Data System", and the Maine DECD Wood Burning Guide.