Municipal Light and Power
Annual Report
on the implementation
of the electrical utility
conservation plan
January, 1984

MUNICIPAL LIGHT AND POWER

ANNUAL REPORT

ON THE IMPLEMENTATION OF THE

ELECTRIC UTILITY CONSERVATION PLAN

JANUARY, 1984

MUNICIPAL LIGHT & POWER — MUNICIPALITY OF ANCHORAGE

Since 1932

FIRST ANNUAL REPORT
ON THE IMPLEMENTATION OF THE
ELECTRIC UTILITY CONSERVATION PLAN

JANUARY 1984

MUNICIPALITY OF ANCHORAGE
d/b/a MUNICIPAL LIGHT & POWER

as required by Section 808
of the
Powerplant and Industrial Fuel Use Act of 1978
42 U.S.C. 8301, et seq. ("FUA")

The purpose of this report is to briefly quantify the reductions in electrical power requirements for ML&P consumers resulting from those elements of ML&P's 1982 Conservation Plan (hereinafter referred to as the "Plan") which had been implemented by the end of 1983.

CONSUMER INFORMATION PROGRAM

ML&P continued its campaign to inform its consumers of the reasons for and benefits of conserving our non-renewable energy resources. The attached Appendix A contains many of the consumer service messages placed in local newspapers and/or magazines in 1983.

MUNICIPAL WEATHERIZATION PROGRAM

In 1983, 342 housing units were weatherized. This brings the total number of units weatherized since 1979 to 1,240. The calculated savings per unit is 40 million Btu/yr. Given the proportion of electrical to total space heat in the Anchorage area is 14.8% (Electric Power Consumption for the Railbelt, May 23, 1980), and ML&P's proportion of the Anchorage residential load is 19.09% (based on 1982 residential sales - Alaska Electric Power Statistics, 1960-1982), the net annual savings to ML&P consumers is 410,594 KWH/yr.

SUPPORTED STATE PROGRAMS

The savings realized by ML&P consumers as a result of state loans and grants for conservation and/or alternative energy measures (under S.B. 438) are difficult to quantify. Based on the State's Division of Energy and Power Development figures and projections listed in the "Plan", the net savings by the end of 1983 are 2,198,535 KWH/yr.

WATER FLOW RESTRICTORS

The number of water flow restrictors installed in Anchorage is not estimated to have increased over the 1982 level of 4,950. Therefore, the calculated annual savings to Anchorage residents remains at the 1982 level of 1,372,986 KWH/yr. Of this amount, ML&P consumers save 19.09%, or an estimated 266,349 KWH/yr.

WASTE HEAT RECOVERY IN CITY WATER

There has been no change in the procedures used to recover ML&P waste heat in the Anchorage water supply. Therefore, the annual savings remain at the 1982 calculated level of 35,159,680 KWH/yr. Given that electric water heating has remained realtively constant at 33% of the total water heating requirement in Anchorage, ML&P consumers save 19.09% of 11,602,694 KWH/yr. or 2,214,954 KWH/yr.

HOT WATER HEATER WRAP PROGRAM

At the end of 1983, ML&P had wrapped 249 electric water heaters. Annual savings are calculated to be 250 KWH/yr. per wrapped water heater. The total annual savings to ML&P consumers are, then, 62,250 KWH/yr.

STREET LIGHT CONVERSION

At the end of 1983, 9.61% of the street lights on ML&P's system had been converted to high pressure sodium bulbs. 7,700,000 KWH were consumed in street lighting from December 1982 through November 1983. Since the sodium lamps use one half the power of mercury vapor lamps, they are currently saving approximately 9.61% of the total street light consumption, or 740,290 KWH/yr.

TRANSMISSION VOLTAGE CONVERSION

Between December 1982 and November 1983, ML&P's net generation and purchases amounted to 689,599,575 KWH. During the same period, sales amounted to 640,158,011 KWH. ML&P's losses over this 12 month period were 49,441,564 KWH. Prior to the conversion of ML&P's transmission system from 34.5KV to 115KV, losses averaged 9.71% (over the period considered, this would amount to 66,983,186 KWH). Thus ML&P savings were 17,541,621 KWH/yr. during this period.

STEAM DRIVEN BOILER FEED/CIRCULATING PUMPS

No installations have been made at this time.

SUMMARY

Excluding the effects of price elasticity, the net savings from the aforementioned items amount to 23,434,593 KWH/yr., or 4.76% of the "base year" generation of 492,657,200 KWH.

The achieved rate of annual savings resulting from the measures described in this report are compared with the five year goal of 49,265,720 KWH/yr. in Figure 1.

FIG. 1: ML&P CONSERVTION PLAN UPDATE

FIRST ANNUAL REPORT ON IMPLEMENTATION

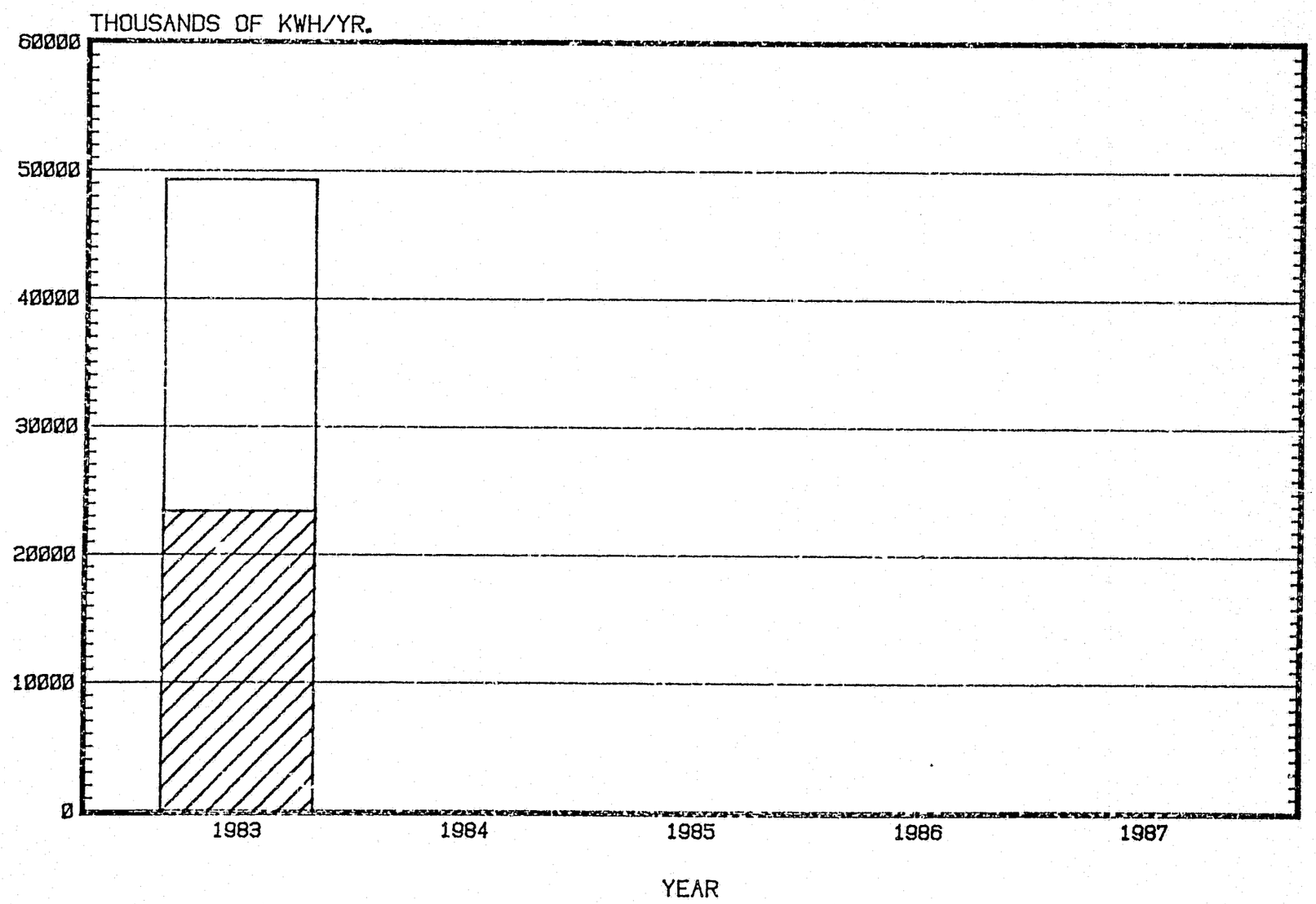


CHART CH1, CHARTFILE CFGOALS, DATAFILE CONPLAN1

APPENDIX A

WRAP IT UP!

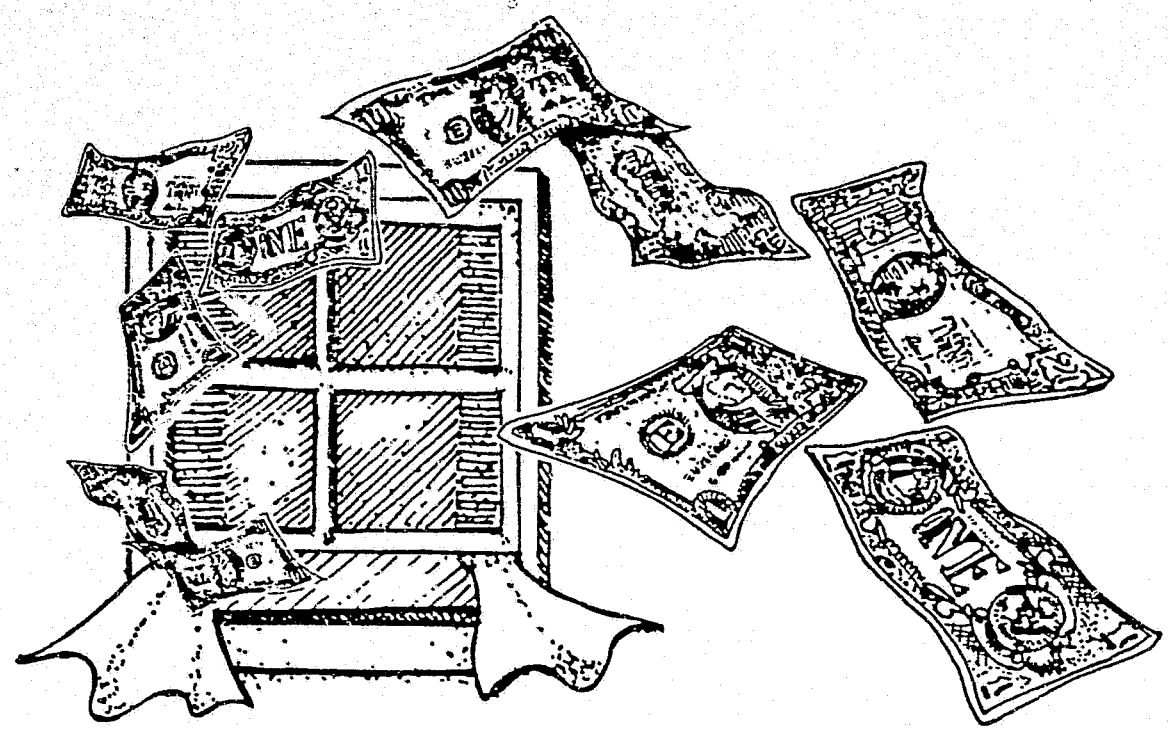
• FREE ELECTRIC WATER HEATER BLANKET
• INSTALLATION PROVIDED FREE
• KEEP ENERGY COSTS DOWN

The Municipality's Energy Conservation Program is offering free insulation wraps for owners of residential-type electric water heaters within the Municipal Light and Power service area. Multi-residential occupants are encouraged to have the building's owner apply.

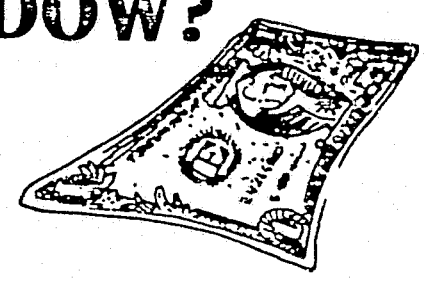
To help eliminate energy waste, the solution is simple, and free! Wrap it up, to keep your energy costs down. To take advantage of this free service, call Municipal Light and Power.

Call For Free Installation

279-7671 ext. 249



ARE DOLLARS FLYING OUT OF YOUR WINDOW?



They are, and so is precious heating and cooling energy, if your windows aren't properly draft-proofed.

Test your windows by moving a lighted candle around the frames and sashes (do this very carefully, and don't let the candle touch your curtains). If the flame dances, you need to caulk, weatherstrip, or install storm windows.

Caulking and weatherstripping are easy to do yourself. Materials cost about $25 for the average house with 12 windows. And your payback will be high—perhaps as much as 10 percent of your annual energy costs.

Manufactured storm windows come in a range of prices and qualities, so you'll want to do your homework if you choose this method of insulating against energy waste. You also can make your own storm windows by stretching a clear plastic sheet over the outside of the window, and nailing it to a wood frame.

Don't let your dollars and energy fly out the window. Insulate!

WASTE NOT

Presented as a consumer service by

Tony Knowles
Mayor

Municipal Light & Power

1200 EAST FIRST AVENUE – ANCHORAGE, ALASKA 99501
TELEPHONE (907) 279-7671

Since 1932

SUPPORT

AMERICAN ENERGY AWARENESS WEEK

OCTOBER 23-29

In the decade since the OPEC oil embargo of 1973, America has made dramatic advances in energy conservation and development.

To recognize those advances, and to encourage increased energy awareness now and in the future, your local suppliers of electricity and natural gas call upon Alaskan industry, government, and individuals to join us in support of American Energy Awareness Week.

Furthermore, we urge all Americans to support the timely development of America's resources and continued energy conservation for a more secure and stable future for our nation.

Chugach Electric

ENSTAR

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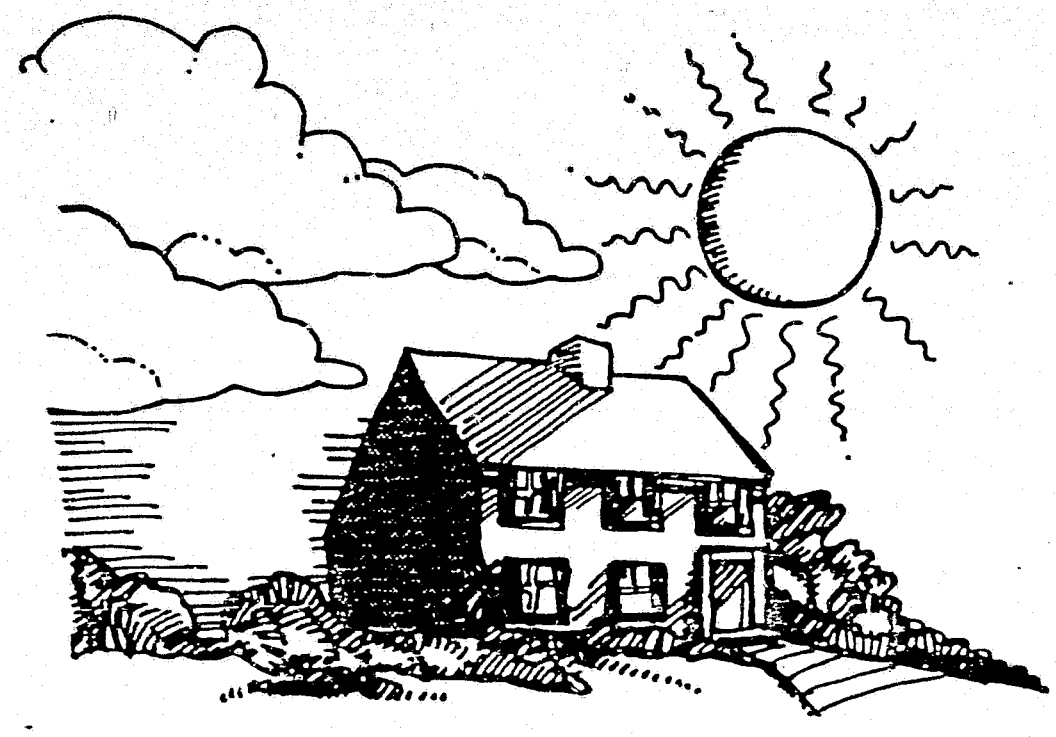
Ask Before You Buy!



When you buy a house, you don't want to get energy bills that are higher than they should be. Here are a few questions to ask before you buy:

- Does the house have good attic and underfloor insulation?
- Are heating ducts, water pipes, and the water heater wrapped in insulation?
- Are windows and doors caulked and weatherstripped to reduce air flow?
- How is the house sited? Good southern exposure can mean lower heating bills.
- Is the heating system maintained and efficient?

If the house you choose is not properly weatherized, you should consider energy conservation improvements.

Tony Knowles
Mayor

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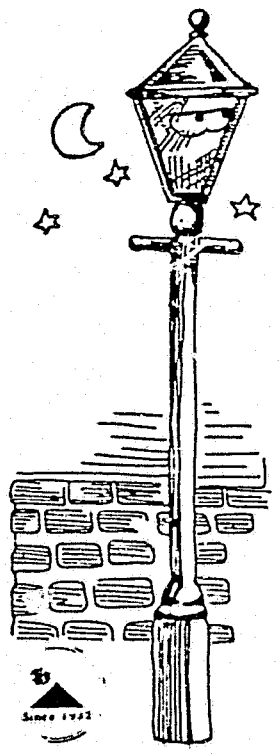

Light Watchmen...

...friendly "night lights" both inside and outside your home can contribute to peace of mind when the sun sets and when you are away from home.

You can keep night lighting costs low and protect your home by following some simple suggestions:

- Don't leave indoor lamps or outside lights on during the day. Invest in low-cost photoelectric cells or time clocks that shut off lights when the sun rises.
- Consider buying a time clock system to turn on lights at different times in the evening if you are away for a number of days.
- Instead of leaving a regular light burning, buy low wattage night lights to guide family members who wake in the middle of the night. Plug the night lights into sockets in areas such as hallways, bathrooms, and near stairways.

Check with local hardware and electrical appliance stores — for more information about night lighting systems and their costs.

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Tony Knowles
Mayor

Is Your WATER HEATER Overheated?

Your water heater may be the most "taken-for-granted" appliance in your home. Normally it works quietly and dependably, providing hot water at the turn of a tap. However, it can also be one of the biggest energy and money wasters you have.

Heating water is a constant process which goes on whether or not water is used. A well insulated water heater minimizes this re-heating process. Water heater thermostats should be set only as high as necessary for household use (normally 110° to 130° degrees).

Remember we are all energy users . . .

AND YOUR EFFORTS COUNT!

Municipal Light & Power in its 50th year of caring

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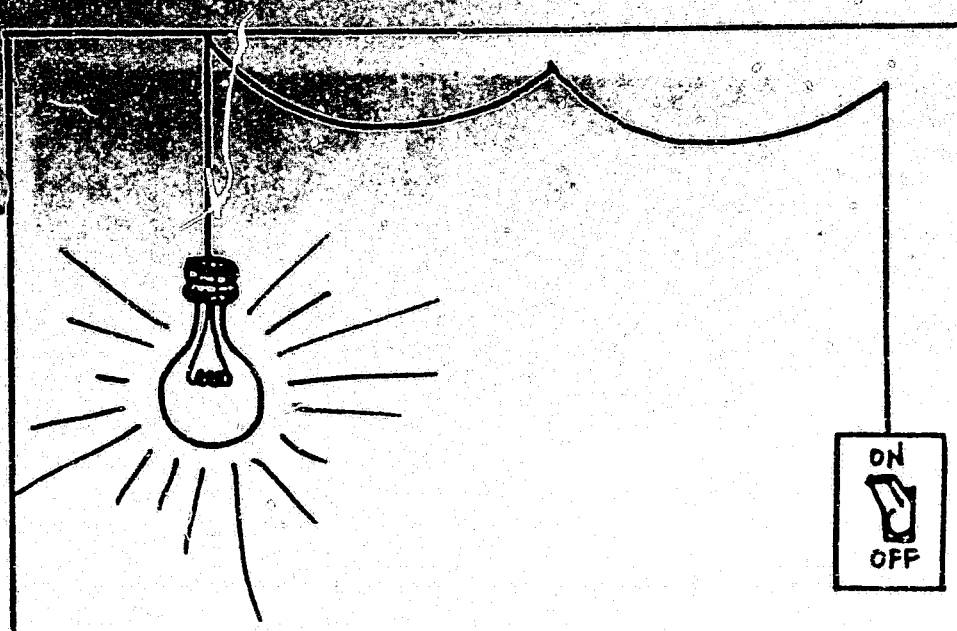

REMEMBER !

Everyone is an Energy Manager..... and your efforts to conserve electricity count.

Since 1932

MUNICIPAL LIGHT & POWER

IN OUR

50TH YEAR

ARE YOU A SPY WHO CAME IN FROM THE COLD?

You don't have to be a character from a spy novel to come in from the cold. Just spy on your own home to find and plug air leaks. You won't be cold, and you can *save up to 40 percent* on your heating bills! Leaks can be almost anywhere, but start by investigating the most common ones:

- **Windows and doors.** Weatherstrip or caulk if you feel a draft. Do the same for doors to home-attached garages and storage areas.
- **Mail chute.** Make sure it closes tightly.
- **Exterior walls.** Caulk any cracks in masonry and between the concrete foundation and house. Repair broken shingles and siding.
- **Electrical outlets and light switches on exterior walls.** Turn off electricity, remove cover plates, and insulate between outlet box and wall.
- **Ducts, pipes and wires.** Caulk or insulate around any holes cut for these in exterior walls, ceilings and floors. Seal duct joints with duct tape or flexible caulk, and wrap them and hot water pipes in insulation.
- **Fireplace.** Make sure damper closes tightly and keep it closed whenever you're not using the fireplace. Insulate around damper or cover it with a board if necessary. Caulk any cracks between the fireplace and the interior wall.
- **Attic.** Plug all gaps and holes cut for pipes, ducts and exhaust fans, except for vents, which must be open to prevent moisture accumulation. *Don't* cover light fixtures either—insulation may cause a fire. Pay special attention to where the furnace stack and chimney meet the house frame—a gap can pull warm air from the basement up and out of the house. Remember to insulate the attic door.
- **Old weatherstrips, caulk and insulation.** Replace if they're torn or in bad shape.

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