

Editor's Note:

This is the third and final installment of "Public Power at the Crossroads." The *Quarterly* previously published "Public Power in the Early Years" in the Spring 1996 issue and "The Decades of Growth, Conflict and Change" in the Fall 1996 issue.

Public Power at the Crossroads...**Nebraska's Electric Systems May Change In Ways Unimagined Today**

Since the 1980s, Nebraska's publicly-owned electric systems have operated in relative calm. Yet clouds are on the horizon as other states consider and begin to alter the historic way in which electric utilities operate. Changes in other states or mandates from the federal government could easily require Nebraskans to change the way their public power systems operate, and possibly not for the better.

Before examining public power's future, a brief overview of the industry, the changes occurring and why they are happening is necessary.

The 800-Pound Gorilla

The electric industry in America is massive. Officials estimate the electric utility industry is worth \$500 billion and produces an estimated \$200 billion in revenues annually — larger than either the telecommunications or auto industries.

Nationally, the industry can be categorized in several ways: type of ownership and function are two of the simplest. Nearly three-quarters of all Americans get their electricity from 249 investor-owned utilities. In Nebraska, investor-owned electric utilities are forbidden.

In America, there are an estimated 3,000 publicly-owned utilities, of which more than 300 operate in Nebraska. Publicly-owned utilities can be local, regional, rural or federal electric systems. Nebraska has examples of all four types: Lincoln Electric System, Nebraska Public Power District, Howard Greeley Rural Public Power District, and Western Area Power Administration, respectively, are examples of each type.

Collectively in Nebraska, there are two regional utilities, 36 rural electric systems, 321 municipal systems, two electric and irrigation systems, two generating and transmission systems and one federal system.

Another way of looking at utilities is functionally. Historically, regulation encouraged electric utilities to become vertically-integrated. Many utilities generate power in plants they own, transmit the power over lines they own and distribute electricity over lines they own to customers within a specified geographical area.

Those promoting deregulation of the electric industry would break up this vertical integration. They suggest that any customer should be able to purchase electricity from any generator. The electricity the customer purchased would then be sent by the generator to the customer over transmission and distribution lines to the customer's home or business. In addition to paying for the electricity, the customer would also pay transportation charges to the transmission and distribution companies.

Deregulatory Nudges

How did deregulation begin? With the passage of the *Energy Policy Act* in 1992, Congress encouraged deregulation of the electric industry at the wholesale level. Wholesale electricity is the power sold to other utilities and distributors. Often the electricity being sold crosses state borders.

At the national level, the Federal Energy Regulatory Commission regulates some aspects of the electric utility industry. In 1996, the Commission adopted what is known as the open-access rule.

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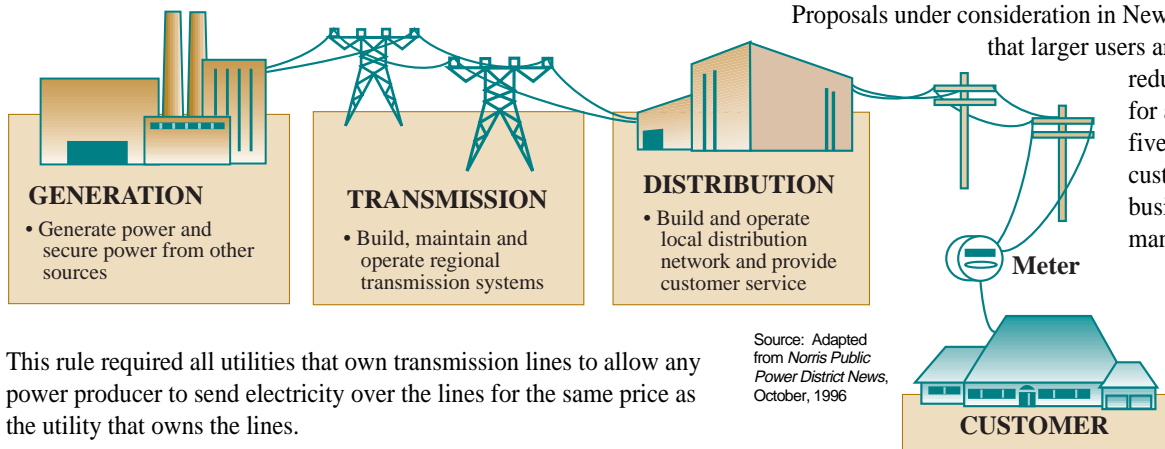
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utilities in the region. Customer choice will also begin in 1998 in California.

Proposals under consideration in New York are more typical in that larger users are expected to reap greater reductions. This proposal calls for a 3.3 percent rate cut over five years for residential customers, 10 percent for large businesses and 25 percent for manufacturers in the state.

A recent survey of electric utility executives confirmed the belief that big power consumers will be the main beneficiaries, while typical small

This rule required all utilities that own transmission lines to allow any power producer to send electricity over the lines for the same price as the utility that owns the lines.

Pushing for Change

Since Congress opened the wholesale transmission system, some across the nation have called for extending deregulation to the retail level — allowing customers to buy their electricity from any power producer. This would effectively end the monopoly electric companies now have over geographical areas.

The nation's largest industries in states with the highest electric costs have pushed the hardest for deregulation. In 1995, New Hampshire led the nation with the highest average rates per kilowatt-hour for electricity — 11.7 cents. At the same time, Nebraskans, on average, were only paying 5.4 cents per kilowatt-hour, the seventh lowest rates in the nation.

Is it any surprise that the first and largest experiment in electricity deregulation at the customer level occurred in New Hampshire last June? Sixteen thousand test participants were required to select an electricity provider from more than 30 different companies. Even experts couldn't figure out which company was the best.

Other states with high cost electricity are also moving toward deregulation. California, another state with high electricity rates, requires only investor-owned electric companies to reduce rates by ten percent for residential and small business customers in 1998. Currently, rates for some publicly-owned electric utilities such as Los Angeles Water and Power are already 25 percent lower than investor-owned

users will see little, if any, reduction in rates.

Currently, Congress is considering mandating complete nationwide deregulation of the industry as early as 2000. Not all in Congress are convinced that a federal deregulation deadline is necessary. However, others supporting federal legislation suggest that some states will not deregulate unless the federal government mandates deregulation.

What is clear is that consensus in Congress on the issue is absent — now and in the near future.

Congressional supporters of deregulation see the electric industry as the "last monopoly." Deregulation of this industry would follow that of the airlines, natural gas, and telecommunications industries.

However, power companies are far different from the other industries. Consumers would likely rank electricity as "the most essential" of the four services. Also, there may be more technological barriers to complete deregulation of power companies than the other industries. For example, power produced in California cannot be sent

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In Nebraska...

Public Power and Deregulation

In 1996, the Legislature directed its Natural Resources Committee to study the state's electric system and the effect of deregulation on the nation's only electric system owned in its entirety by consumers.

The study is nicknamed "LR 455" because the legislative resolution — or LR, for short — seeking the study was numbered 455. The study should be completed in 1999.

The study is being guided by a task force and a 40-member advisory committee. The task force is comprised of a project manager, facilitator and six Nebraska Power Association representatives. This group primarily functions as the study's staff.

The status of the study, a brief history of electricity in the state and other information is available via the Internet at: <http://www.nppd.com/lr455>

"Since 1992, Congress has encouraged states to deregulate their electric industry. Some, like Rhode Island and California where electricity prices are highest, are designing solutions to their specific situations. Solutions without the help of Congress.

"In Nebraska, we are just beginning a three-year study, trying to look at the state's public power system in the context of deregulation. We don't want Washington politicians to destroy a treasure that took more than 100 years to build.

"Yet, there are those in Congress who believe all Americans must be forced to choose their electricity supplier. I disagree. Americans must also have the right not to be drafted as volunteers in the War of the Baby Bulbs. The stakes are just too high.

"The states already have the power to deregulate. Let them do so, but only if they choose."

E. Benjamin Nelson

(Excerpted from an article on deregulation of the electric industry in the February 11, 1997, *Washington Post*.)

to and used in New York, and public ownership was not a significant factor in earlier deregulation efforts. When the public owns nearly 25 percent of the electric systems in the nation, deregulation must be approached differently.

Those who supported earlier deregulation efforts have noted that the natural gas industry was deregulated more than a decade ago, but there is still not consumer choice in most regions of the country.

Deregulation of the telecommunications industry, still in its infancy, may be yielding far different results from those promised by proponents. Since deregulation, cable television rates in most areas have risen, not fallen as promised.

One of the thorniest issues in telephone deregulation, curtailment of local residential subsidies, is now at the discussion stage. Historically, telephone rates for business have been about three times higher than residential rates and have subsidized the higher costs of residential telephone service. The Federal Communications Commission recently said that the residential subsidization issue must be addressed as required in the legislation. Under the bill passed by Congress, the actual cost of service must be reflected in the charges billed to a customer.

The Devil's in the Details

Proponents and opponents of deregulation — and those undecided — have identified some key elements in the current deregulation discussion. Not all the principles identified may be applicable in Nebraska, but the outcome of deregulation efforts could shape the state's utility operations:

- ◆ **Consumer Protection.** If deregulation of the electric industry creates numerous new and untested electricity providers, residential and small business customers could be the targets of deceptive marketing practices. What if Nebraskans would have to choose an electricity provider from 30 mostly unknown companies like those test participants in New Hampshire?
- ◆ **Cost Shifting.** Some cost shifting has resulted from the deregulation in other industries and could happen in the electric industry. Many experts predict that the largest electricity users will save the most. If costs have to be shifted from this group to others — residential customers, small businesses, rural users or utility owners — who should pay?
- ◆ **Creation of an Independent Energy Agency.** Many states require ratepayers and utilities to financially support a variety of public interest activities such as energy efficiency, renewable

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Looking Back 110 Years... Crete Electric System Was One of the First

Founded in 1871, Crete became a bustling village of more than 1,800 people in just nine years. By 1883, wish lists for local amenities — we now call them “civic improvements” — began to appear in the newspapers. One of the needs identified was lights on the city's streets.

By 1887, a plan for meeting this local need began to take shape and the Crete Municipal Electric System was created. From streetlights in the 1880s to serving the town's 4,841 residents today, Crete's locally-owned electric system has provided 110 years of service. It is the oldest electric system in Nebraska to remain municipally-owned.

In the Beginning There Was Light

In April 1887, two local businessmen, White and Glade, offered to provide the city with electric lights in return for the free use of lights in their mills. The plan called for constructing a small hydropower plant on the Big Blue River which ran through the town. By teaming the two lighting projects, the expense of an electric light system was cut to about \$5,000, which was nearly the cost of building a plant for the city's lights alone.

Under the project's plan, the city would pay for its share of the light system using one-half of the license money paid by saloons for the next two years. By using the license fees, no additional taxes were needed. Local resident, J.R. Johnson, also donated a water wheel for the hydropower project. In September, 1887, the streetlights were turned on amidst a celebration on Maine Street.

A month later, the celebration seemed premature. The city had agreed to take the electricity for the lights for a one month trial, and for a

fixed sum. At the end of the month, the city ordered the lights turned off. While the arc lights operated satisfactorily, the incandescent lights did not. In the first month, 200 incandescent lamps were used in ten fixtures.

If one light burned out, nine more also burned out because of the system's inability to regulate the current. By spring of the next year, the technical problems had been resolved and the lights were again brightly burning.

Adding Coal to Water

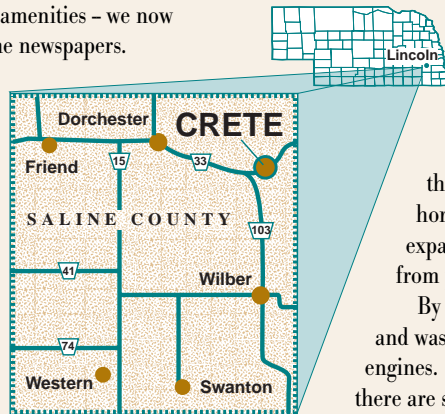
In 1890, Crete's system was improved with the installation of a coal-fired boiler and a 75 horsepower steam engine. The power plant expanded again in 1902 and a change was made from producing direct current to alternating current.

By 1928, the old plant had become uneconomical and was replaced by a new facility powered by diesel engines. Starting with only one diesel engine in 1928, there are seven today. The engines are dual-fueled, operating on diesel or natural gas. Dual fuel capability is an advantage because a widespread electrical outage can

impair the movement of natural gas to the pumping stations. If this happens, the electric utility can rely on its stockpile of diesel fuel to generate electricity.

Crete's generating capacity is 16 megawatts with a peak load of 20 megawatts. This is the largest load of any member of the Municipal Energy Agency of Nebraska. Load is the amount of electric power required to meet all the needs of a utility's customers. Crete has 2,500 electric customers, three of which are industrial users. These three account for half of the utility's electrical load, also a feature unique to Crete's system.

It appears the streetlights in Crete will be burning brightly for a long time to come. ©



energy, low-income assistance and research. These efforts may currently be underwritten by the utilities. In a deregulated environment, a separate and independent entity may be needed to continue efforts in these areas.

- ◆ **Divestiture of Utility Assets.** Some are proposing that the vertical integration that has defined the industry for decades cease. Under this proposal, an electric utility could only be one of the following: a power generator, a transmission company or a local distributor.

In Nebraska, this could result in both Omaha Public Power District and Nebraska Public Power District — as well as a number of other utilities in the state — being separated into multiple entities. Under this proposal, Nebraska would be turning back the clock and using a utility structure it found unworkable 40 years ago (see the Spring 1996 *Quarterly*).

- ◆ **Energy Efficiency.** In some states, utilities are required to undertake energy efficiency projects. Some fear that in a competitive environment, efforts promoting energy efficiency, which has significant environmental benefits, may be abandoned in a price-cutting war. A system benefits or national wires charge has been proposed that would be added to all utility bills. The funds generated by this charge would then be returned to the states for a variety of uses such as energy efficiency.

- ◆ **Environmental Protection.** Some are concerned that industry restructuring poses threats to environmental quality. States with laxer pollution controls could become meccas for power generators using less stringent pollution controls. Also, coal is typically the cheapest fuel for electric generators. Competition to produce low-cost electricity could cause generators to use more coal and minimize use of cleaner-operating but more expensive generating facilities.

- ◆ **Federal Hydropower.** The status of the federally-owned hydropower projects may be the longest running and most contentious in the entire deregulatory puzzle. Since 1994, some in Congress have wanted the federal government out of the power generation and transmission business. Efforts to privatize these federal assets failed, except for the sale of the Alaska Power Administration which was approved by Congress in 1996.

An estimated 15 percent of Nebraska's annual electric needs are met by federal hydropower coming from the Western Area Power Administration. In 1995, the average cost per kilowatthour for the federal power was 1.8 cents, about one-third the average cost per kilowatthour of electricity produced in Nebraska. The outcome of this issue could have significant impacts on utilities and ratepayers in the state.

- ◆ **Renewable Energy.** In some states such as California and Iowa, electric utilities are required to purchase a certain amount of electricity from renewable resources. In a competitive environment, this requirement might be eliminated.

Some non-fossil fuel advocates are suggesting that all retail electricity suppliers must be required to generate a certain level of electricity from renewable sources. The renewable sources include solar, wind, geothermal and biomass. Each state would set the minimum level which must be met.

- ◆ **Research and Development.** Some are concerned competition will financially hinder electricity research efforts. Federal, state and industry research is conducted primarily at research

laboratories, universities and by the utilities. Some have predicted research entities such as the Electric Power Research Institute may cease to exist as utilities eliminate contributions to research projects to minimize short term costs.

In Nebraska, this type of financing has helped with projects as diverse as Lincoln Electric System's ice storage and generating systems and wind-to-electricity generation research being undertaken by several utilities.

- ◆ **Retail Competition.** Several consumer groups suggest that states should select an electric utility of last resort, in case the existing utility supplier defaults and also to protect consumers. States are also encouraged to make certain that real competition exists in all areas. The adoption of consumer protection mechanisms is also encouraged. Another suggestion is having an annual period where customers could switch utilities without charge.

- ◆ **Stranded Costs.** This issue may be the most nettlesome. In earlier times, some utilities embarked on a nuclear power construction boom using what turned-out-to-be faulty cost and need projections. In other cases, a utility regulator might have ordered a utility to provide a certain percentage of the electricity from renewable sources. Some have predicted under a deregulated environment, dozens of currently operating nuclear power plants would cease operation since nuclear units generally produce higher cost electricity.

Under past industry practices, rate setters have allowed utilities to charge their ratepayers for "prudently incurred" costs such as plant construction or renewable power generation over a period of time. What happens to these stranded costs in a deregulated environment? Do the ratepayers continue to incur the costs? Are the costs transferred to the utility which may, in turn, lead to the utility filing for bankruptcy? Do all new power providers help pay for the stranded costs?

- ◆ **Universal Service.** One of the least controversial of the issues is seeing all customers can obtain electricity. Some suggest those groups who could lose the most under deregulation would be rural customers, where service costs can be high, and customers with limited incomes. Under some scenarios, competition among electric providers could result in "cherry picking" — where competitors target the largest and most affluent electric users, leaving the existing utility with a much smaller number of customers who must share the same costs. This issue could have a significant impact on rural electric utilities in Nebraska.

In a competitive environment, locally-owned utilities could see revenues decline which, in turn, could affect government services. A number of towns, such as Hebron, rely on excess revenues from the

“Nebraska’s all-public electric system is unique; it’s the only one in America. It is an island of socialism in a sea of free-enterprise capitalism.

“But it is socialism that works. Economical, dependable electric power is one of the state’s reliable economic advantages, for average consumers and for businesses that use large amounts of power.”

Editorial
Hastings Tribune
March 20, 1996

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Reap Savings Month After Month, Year After Year...

Is A 90+% Efficient Gas Furnace Really Better?

As the wind chills plunged to 40 and 60 below zero in December, some Nebraskans counted themselves fortunate their furnace was working. They knew more natural gas was being used to heat their home, but that happens every winter.

Then the gas bill arrived. From Omaha to Fairbury to Alliance, some Nebraskans were receiving the highest bills they had ever gotten. What they didn't know in December was the cost of natural gas had remained above historic levels for almost all of 1996. More gas was used in December and it was considerably more expensive as well.

People were advised to turn down thermostats, close vents to unused rooms, open the drapes on sunny days and take other steps to reduce energy use.

A Cheap Solution

Maybe it's time to consider other options before the winds of next December return. One option is inexpensive and the other not.

Replace your traditional thermostat with one with programmable features. Some programmable thermostats can be purchased for less than \$50. While programmables don't actually save energy, they remember what people can easily forget: to change temperature settings when the house is empty or at night.

Studies by the federal Energy Department have shown that installing a programmable thermostat can reduce energy use by three percent for each degree the temperature is reduced. In some cases, the savings can reach five to 15 percent, depending on several factors.

Not So Cheap

If your natural gas furnace was new when harvest gold and avocado green were popular colors, it's time to consider replacing it. Furnaces aren't cheap. Prices can range from \$1,500 to \$6,000, depending upon the size of house, efficiency of the furnace, amount of ductwork needed and other factors.

Furnaces that are 20 or more years old are about 65 percent efficient or less. That means more than a third of the natural gas you paid for in December wasn't used to heat your home. It was just wasted, very much like driving a car with a leaking fuel tank.

Cost More = Cost Less

Once you've made the decision to replace your natural gas furnace with a new one, there is only one more decision: whether to select the 80+ percent efficient model or the 90+ percent efficient model that can cost as little as \$400 more.

The furnace companies' literature claims the more efficient furnace is better, but what can the experiences of thousands of Nebraskans tell you?

In the past six years, the Energy Office has financed nearly 5,000 natural gas furnace replacements in Nebraska homes. Homeowners and others can finance energy efficiency improvements with 6% Dollar and Energy Saving Loans. These loans are available through 320 local lenders across the state.

In the largest study of natural gas furnace replacements, the Energy Office analyzed hundreds of homes where 80+ percent or 90+ percent furnaces replaced older, inefficient and sometimes dangerous ones.

The random sample of 15 percent of the loans for furnaces revealed that Nebraskans were evenly divided in selecting 80+ or 90+ percent efficient furnaces.

Pocketing \$60

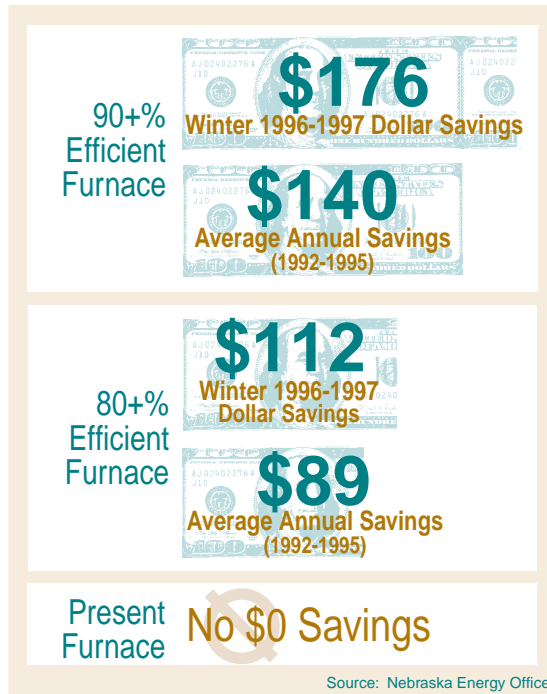
However, the dollar savings of the two groups revealed considerable differences. Those Nebraskans who installed 80+ percent efficient furnaces saved about \$89 annually, compared to \$140 a year for those who selected the even more efficient 90+ percent model.

This winter, the savings increased dramatically because of the increase in the cost of natural gas. Estimated savings for the 80+ percent efficient furnaces totaled \$112 for winter 1996-1997 and \$176 for the 90+ furnaces.

A statewide average was used to estimate the cost of natural gas since gas costs can vary widely across Nebraska.

The study's findings are conclusive. The 90+ percent furnaces are worth the extra cost, which is usually recovered in ten years or less. ☺

Dollar Savings From Energy Efficient Furnaces



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city's electric system to support city services. "Let's face it, Hebron's chief source of income is our electrical system," said Mayor Randal Hergott according to the *Hebron Journal Record*.

Under a worst case scenario, local electric rates could rise substantially and city services such as libraries, fire and police could decline.

Changes Are Coming

Even if Congress takes no action on pending deregulation soon, changes in other states will occur. Those changes may have an impact on the state's utilities. Stay tuned. The *Quarterly* will periodically provide updates on this issue as trends become clearer. ☺

The *Nebraska Energy Quarterly* features questions asked about 6% Dollar and Energy Saving Loans. Loan forms may be obtained from participating lenders or the Energy Office.

Questions on Recent Changes...

6% Dollar and Energy Saving Loans



Recently, there have been changes in the types of improvements that can be financed with Dollar and Energy Saving loans. Briefly, what are the changes?

In January, both the loan applications and the types of improvements that could be financed were changed. Since the loans became available in 1990, the efficiency levels of many types of improvements have dramatically increased. The changes were needed since the goal of the loans is to provide financial incentives to encourage Nebraskans to purchase more efficient equipment.

In detail, what changes were made?

These changes occurred on all forms:

- Format standardized
- Utility reporting section standardized
- Borrower forms were changed from white to yellow
- The age of the building is now required for some improvements

Changes on specific forms or types of improvements:

Form 1/Appliance Replacements

- Minimum standards are now based on kilowatthours per year use identified on appliance ENERGY GUIDES
- Upright freezers eliminated from financing

Form 2/Door, Window, Wall and Ceiling Projects

(Formerly 2A)

- Replacement windows and glass doors must now be R-2.5 or higher for the whole unit
- Exterior doors must now be R-4 for door systems or R-8 for doors only
- Manufacturers' data on R-values for doors and windows must now be attached to Form 2
- Minimum floor insulation added over an unheated space increased to R-19

Form 2 Siding (Formerly 34)

- Adding as much insulation as possible to wall cavities is now required prior to installing exterior insulation board and siding

Form 2 Roofing (New)

- More information is now required for roof repair projects which are a part of adding insulation to the attic or ceiling

Form 3/Heating, Cooling Water Heating Projects (Formerly 2-C)

- Most information required on existing equipment has been eliminated
- Minimum requirements increased for most types of improvements. Only equipment which is in the top 25 percent of the efficiency range can be financed

Form 4/Lighting Projects (Formerly 2-D)

- Information on the existing lighting equipment has been standardized

- The pre-approved fluorescent lighting types are now listed on the form
 - A 15 percent reduction in the total connected watts of the existing lighting system is now required for financing
- Form 8/Telecommunications Equipment**
- Any computers, monitors, printers, modems and fax machines must now carry the U.S. Environmental Protection Agency's Energy Star seal

Were projects supported by an energy audit also revised?

Yes, now borrowers must identify the improvements they plan on making that are listed on Form 6/Technical Audit Acceptance. After the borrower selects the improvements and signs Form 6, the form is returned to the Energy Office as part of the entire loan package.

Can the entire cost of a project be financed without deducting utility or product rebates?

This previously allowed practice was eliminated. Rebates must be subtracted from the requested loan amount.

Can eligible and ineligible projects be combined in a single loan?

Yes, but only if the lender is willing to make the entire loan at 6% and is willing to accept Energy Office participation of 50% of the eligible project amount. Generally, most lenders separate the projects into two loans.

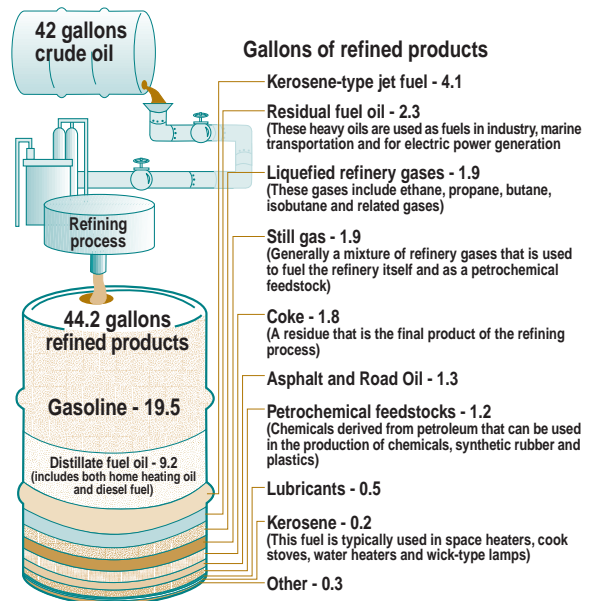
How long do borrowers have to complete projects after the loan has been approved?

At the beginning of 1997, the amount of time a borrower has to complete a project was reduced to 120 days (from the date the lender receives the signed funding commitment from the Energy Office). A project may receive a time extension only if a written request from the lender has been sent to the Energy Office stating the reasons why the project could not be completed within the 120 days. ☺

More than 11 By-Products...

What A Barrel of Crude Oil Makes

According to the American Petroleum Institute, one barrel of oil contains 42 gallons and can produce 44.2 gallons of refined petroleum products because of "processing gain."



Emergency Funds Add 155 Homes...

Home Weatherization for Needy Nebraskans Gets \$349,895 Boost

In January, President Clinton released \$210 million in emergency Low Income Home Energy Assistance Program funds to help poor Americans across the nation pay for heating bills and to weatherize some homes.

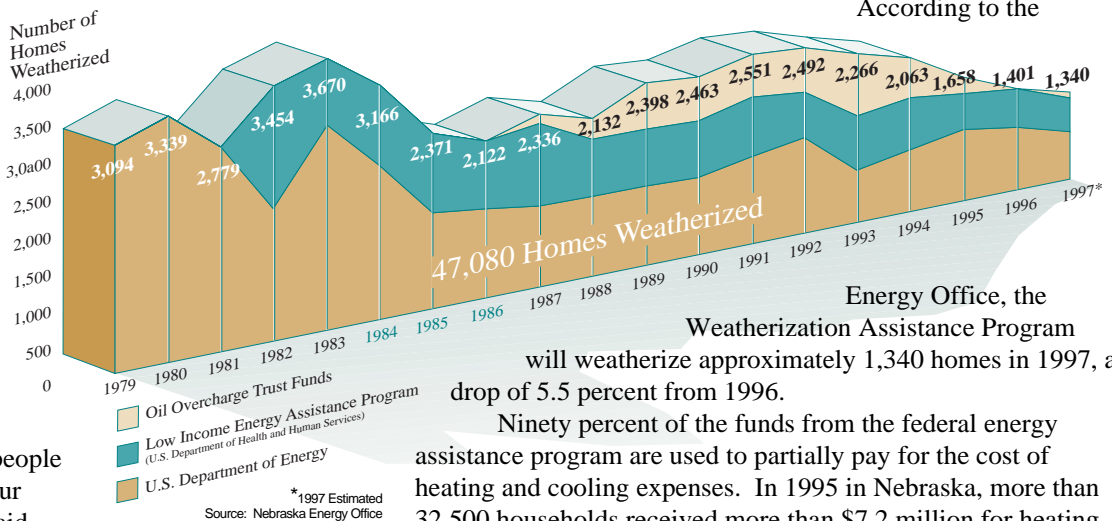
Nebraska, which received a total of \$3.18 million, was one of eight Midwestern states that received additional funds because of severely cold weather in December and January. According to federal sources, these states had significantly colder weather this year than in the last 30 years.

"The severity of this year's cold weather, in addition to a one-time price spike in fuel costs, constitutes a threat to low income families, senior citizens and people with disabilities throughout our country," President Clinton said. "These emergency funds will keep the heat on and people safe."

In Nebraska, about ten percent of these funds are used to make energy saving improvements in homes where residents cannot afford to make the improvements themselves.

"The \$349,895 that will be transferred to the Nebraska Energy Office for home energy improvements will mean another 170 homes will be warmer and cheaper to heat next year," Pete Davis, weatherization manager in the Energy Office, said. The latest assessment of weatherized homes found on average energy use was reduced by 18 percent annually, saving \$130.

Homes Weatherized in Nebraska, 1979-1997*



According to the Energy Office, the Weatherization Assistance Program will weatherize approximately 1,340 homes in 1997, a drop of 5.5 percent from 1996.

Ninety percent of the funds from the federal energy assistance program are used to partially pay for the cost of heating and cooling expenses. In 1995 in Nebraska, more than 32,500 households received more than \$7.2 million for heating assistance. The average payment per household was \$219.20.

For more information about the Weatherization Assistance Program, contact the community action agency that services your area or contact **Pete Davis** in the Energy Office. ☺

Money Saving Opportunities

Several federal agencies operate voluntary efforts to reduce pollution and waste of resources, including energy, that offer assistance to businesses and others to achieve these goals.

The efforts primarily target methane and greenhouse gas pollution and seek to enlist farmers, local governments and commercial and industrial businesses:

- ❖ **AgSTAR for livestock producers.** This multi-agency voluntary effort is operated by the Environmental Protection Agency and seeks to use cost-effective methods for reducing methane emissions while improving agricultural production efficiencies for livestock producers. Call the AgSTAR hotline, **800-952-4728**, for more information.



- ❖ **Motor Challenge for industries and utilities.** Operated by the U.S. Department of Energy, this effort concentrates on converting electric motor systems to more energy-efficient models. Since motor systems account for almost 75 percent of the electricity used by industry the dollar and energy savings could be substantial. Call the Motor Challenge hotline, **800-862-2086**, for more information.

- ❖ **Waste Wi\$e for large companies and organizations.** This Environmental Protection Agency effort helps its partners identify and find innovative solutions to reduce or reuse solid waste. Call **800-EPA-WISE** for more information.





Information Services and Resources



Mailing Address Telephone Computer Access

The Energy Office encourages readers to contact these resources on the topics indicated. The Internet sites listed should not be construed as advocating or representing any position of the Nebraska Energy Office nor does the Energy Office guarantee the content or accuracy of any information presented at these sites.

Readers without computers or access to the Internet, are encouraged to contact their local library where Internet services may be available.

American Gas Online. This is the site of the American Gas Association and includes industry and consumer information. Internet: <http://www.aga.com>

American Petroleum Institute. This is the oil industry's leading organization and can be a resource for news, industry statistics and educational material. Internet: <http://www.api.org>

The **Department of Energy.** This home page provides general information about the federal agency and identifies starting points with pathways to other information. Internet: <http://www.doe.gov>

The **Energy Efficiency and Renewable Energy Clearinghouse** provides fact sheets, brochures, videos and publications on energy efficiency and renewable energy.

Energy Efficiency and Renewable Energy Clearinghouse,

P.O. Box 3048,
Merrifield, VA 22116

Phone between 7am-4pm CT,
Monday-Friday. **1-800-363-3732** or for the hearing impaired call **1-800-273-2957** 8am-6pm

Internet: <http://erecbs.nciinc.com> Modem access at **1-800-273-2955**

EcoNet. This is one of the Institute for Global Communications' resource collections that includes selections on efficiency, biomass, geothermal, hydro, solar, wind and non-renewable resources as well as links to more than several hundred sites.

Internet: <http://www.igc.apc.org>

Electric Power Research Institute. This organization is the research arm for nearly 700 electric utilities. Internet: <http://www.epri.com>

Electric Utility WWW Resource List. This site contains a very extensive collection of links to worldwide sites relating to all aspects of the electric industry. Links to four Nebraska utilities are also here. Internet: <http://sashimi.wwa.com>

"The mission of the Nebraska Energy Office is to promote the efficient, economic and environmentally responsible use of energy."

In accordance with the *American Disabilities Act*, the state will provide reasonable accommodation to persons with disabilities. If you need reasonable accommodation to participate in any program or activity listed in this publication, please contact the Energy Office at 402-471-2867 to coordinate arrangements. Upon request, this publication may be available in alternative formats.

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The **Energy Efficiency and Renewable Energy Network** or EREN is a gateway to energy efficiency and renewable energy information sources.

Internet: <http://www.eren.doe.gov> (SLIP connection required).

Specific Areas:

BioPower

<http://www.eren.doe.gov/biopower/>

Green Power Network

<http://www.eren.doe.gov/greenpower>

Hydrogen InfoNet

<http://www.eren.doe.gov/hydrogen/infonet.html>

Office of Building Technology, State and Community Programs

<http://www.eren.doe.gov/buildings>

Office of Industrial Technologies

<http://www.oit.doe.gov/>

Office of Transportation Technologies

<http://www.ott.doe.gov/>

Office of Utility Technologies

<http://www.eren.doe.gov/office/utility/>

Photovoltaics

<http://www.eren.doe.gov/pv/>

Superconductivity

<http://www.eren.doe.gov/superconductivity/>

Wind Energy

<http://www.eren.doe.gov/wind/>

Interstate Oil and Gas Compact Commission.

This organization of 36 states is primarily concerned with state and federal oil and natural gas regulations and issues. Internet: <http://iogcc.oklaosf.state.ok.us>

Natural Gas. This site covers the world of natural gas including news, prices, weather and more. Internet: <http://www.naturalgas.com>

The **National Energy Information Center** provides data and projections on energy production, consumption, prices and supplies.

National Energy Information Center

U.S. Department of Energy

Forrestal Bldg., EI-22, Room 1F048

1000 Independence Ave. S.W.

Washington, D.C. 20585

Phone between 7am-4pm CT,

Monday-Friday. **1-202-586-8800**

Internet: <http://www.eia.doe.gov>

Modem access at **1-202-586-2557**

The **National Renewable Energy Laboratory/ Technical Inquiry Service** offers free technical information on solar and other renewable technologies for scientific and industrial professionals.

Technical Inquiry Service National Renewable

Energy Laboratory

1617 Cole Boulevard

Golden, CO 80401

Phone between 9am-6pm CT,

Monday-Friday. **1-303-275-4099**

Internet: <http://www.nrel.gov>

Specific Areas (top of next column):

Specific Areas (continued)

Alternative Fuels Data Center

<http://www.afdc.doe.gov>

Basic Sciences

http://www.nrel.gov/research/basic_sciences/basic_sciences.html

Buildings and Thermal Energy Systems

<http://www.nrel.gov/research/buildings/buildings.html>

Business Ventures

<http://www.nrel.gov/business/tto/tto.html>

Energy Analysis and Applications

<http://www.nrel.gov/research/ceaa/index.html>

Hybrid Electric Vehicles

<http://www.hev.doe.gov>

Industrial Technologies

<http://www.nrel.gov/research/itdhome.html>

International Programs

<http://www.nrel.gov/business/international/international.html>

National Wind Technology Center

<http://nwtc.nrel.gov>

Photographic Information Exchange -- PIX

<http://www.nrel.gov/pix/pix.html>

Photovoltaics

<http://www.nrel.gov/research/pv/pv.html>

Renewable Resource Data Center

<http://rredc.nrel.gov/>

Solid State Theory Group

<http://www.sst.nrel.gov/>

Sunrayce

<http://www.wunrayce.com>

Transportation Technologies and Systems

<http://afdc3.nrel.gov/CTT/ctt.html>

Nebraska Ethanol Board. This state government

site contains a wealth of specific information on ethanol. Internet: <http://nebsspc.nrc.state.ne.us>

The **Nebraska Math and Science Initiative** provides teachers with energy-related materials.

Nebraska Math and Science Initiative/PEERS

Academy Office

University of Nebraska - Lincoln

126 Morrill Hall

Lincoln, NE 68588-0350

Phone **1-402-472-9302**

E-mail: energy@unlinfo.unl.edu

Propane Gas. This site covers topics such as price, news and consumer information relating to propane gas. Internet: <http://www.propanegas.com>

The White House Briefing Room. This site offers access to press, issues and events information as well as the federal government's latest social and economic statistics. Internet: <http://www.whitehouse.gov>

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energy@mail.state.ne.us

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