

# Nebraska ENERGY

Q U A R T E R L Y

Nebraska Energy Office

Spring 1993

Btu Tax Impact pages 4 & 5

*Like Winning the Lottery...*

## What Would You Do with an Extra \$250?

A state government economist said that if energy consumption decreased in Nebraska by only ten percent over the next five years, net personal income would increase by \$400 million annually, the equivalent of \$250 for every man, woman and child.

### A "New Industry" in Arapahoe

"By any standard of measurement, such gains represent a major economic development opportunity," said Don Macke, Director of the Rural Development Commission. "In a town the size of Arapahoe (1,000), a ten percent energy efficiency gain would create \$240,000 in additional area spending. It's the equivalent of attracting a new industry with 15 employees — that's banner front page news in any town."

The Energy Office is actively participating in the state's *Development Network* with a goal of assisting communities pursue energy efficiency opportunities as a part of their local economic development efforts.

### Schuyler's "New Plant"

Since 1988, one town has been building its new energy efficiency "plant." For the past five years, Schuyler, with the help of the Energy Office and local lenders, capitalized a low-interest loan pool for making energy saving improvements in business, government and nonprofit buildings. In 1991, homes also became eligible for the 3.8 percent loans — the

See Extra \$250 on page 6

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STATE OF NEBRASKA

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## UNL Research... Ethanol from Kearney Crop Waste?

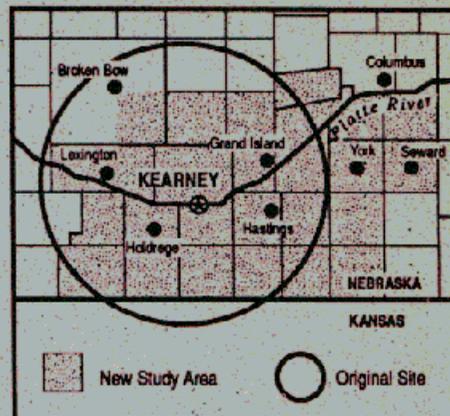
Can corn stubble standing in fields around Kearney be converted into hundreds of millions of gallons of ethanol each year? A 1991 National Renewable Energy Laboratory preliminary study of the state's biomass-to-ethanol potential said it could.

And now, the Industrial Agricultural Products Center at the University of Nebraska-Lincoln is trying to verify the original research and determine other factors affecting possible ethanol production. The study, after examining 69 areas in thirteen western states, found the site with the greatest potential for ethanol from crop wastes to be an area 70 miles around Kearney. Annual ethanol production of 205 million gallons from corn crop residue was also projected. Some were skeptical.

That is why the Western Regional Biomass Energy Program, of which Nebraska is a member, is financing the university research. The study will also examine factors potentially affecting production including harvesting, collection, storage, pricing and the availability of crop wastes.

### Platte River Ethanol

In looking at sites around Kearney, researchers learned that the proposed 70-mile radius was impractical based on actual use and geography. As a result, the study shifted to a 25 county area stretching from north of the Platte River to the



The original and new study areas for an ethanol plant using corn field wastes are illustrated.

Kansas border. The area's annual crop production and yield variations as well as current uses of the residue will be examined. Minute but important packing and storage factors will also be considered. For example, is a round or a conventional square bale better? And what should be a bale's optimum size? Key storage issues involve field, on-farm, collection or processing plant sites.

See KEARNEY on page 2

KEARNEY continued from page 1

Getting crop wastes to a processing facility is also a factor and raises the question of who should deliver the field waste — farmers, the processor or someone else?

### Economic Cents

Lastly, the study will examine whether this type of production facility is economically feasible for the farmer and the plant operator. The cost factors being considered are

- The amount of fertilizer needed to replace nutrients supplied by the residues
- Modifications to machinery
- Additional field work
- Site processing and storage
- Competing markets for crop wastes
- Constraints on use of crop waste under federal programs such as land banks and price supports and subsidies
- Crop waste price level needed for profitability

The final research report is expected to be completed by early spring. For more information about this project, contact Kirk Conger in the Energy Office.

*Coming this Fall...*

## Trails Network Plan Is on the Drawing Board

Nebraska is a step closer to having a recreational trails system. The Energy Office, the Department of Economic Development and a contractor are creating a plan identifying likely locations for a statewide trails system.

The initial proposal suggests incorporating existing trails, potential corridors and tourism sites into a trails system in 11 regions of the state. These regional networks would be linked to create a statewide system.

The 11 regional corridors are Pine Ridge (Harrison to Gordon), North Platte Valley (Mitchell to Sidney), Ogallala (Ash Hollow, McConaughy and Ogallala), Niobrara (Valentine to Bassett), Sandhills (Mullen to Gothenburg), Red Willow (McCook to Cambridge), Republican Valley (Alma to Superior), Central (Burwell to St. Paul), Elkhorn Valley (Neligh to Norfolk), Lewis and Clark (Niobrara to South Sioux City) and Eastern (West Point to Brownville).

### Regional Airing

In February, the original concept was presented to people at ten meetings across the state. Suggestions for more regional trails were sought. "With the regional focus, communities can see a direct benefit for local tourism and recreation," said Kimberly Brown of the Energy Office. "An added benefit is the reduction in energy use as people walk, bike and ride snowmobiles or horses."

A 20-member recreational trails committee is responsible for the project. The plan will be completed by the fall.

The \$75,000 trails plan is being funded by the Energy Office. An additional \$8,631 in staff and office expenses are being provided by the Department of Economic Development. For more information about this project, contact Kimberly Brown in the Energy Office or Tom Doering at the Department of Economic Development.

## Information Services

The toll-free **Alternative Fuels Hotline** provides general and specific information on alternative vehicular fuels including fuel performance and availability. Call between 9am-5pm CT, Monday-Friday. (800) 423-1363

**CAREIRS** The Conservation and Renewable Energy Inquiry and Referral Service answers questions at no charge. Call between 7am-4pm CT, Monday-Friday. (800) 523-2929 Renewable Energy Information P.O. Box 8900 Silver Spring, MD 20907

**NATAS** The National Appropriate Technology Assistance Service offers free technical and commercialization assistance. Call between 9am-6pm CT, Monday-Friday. (800) 428-2525 NATAS U.S. Department of Energy P.O. Box 2525 Butte, MT 59702-2525

**NREL/TIS** The National Renewable Energy Laboratory/ Technical Inquiry Service offers free technical solar information for scientific and industrial professionals. Call between 9am-6pm CT, Monday-Friday. (703) 487-4650 Technical Information Service National Renewable Energy Laboratory 1617 Cole Boulevard Golden, CO 80401

**NEIC** The National Energy Information Center provides data and projections on energy production, consumption, prices and supplies. Call between 7am-4pm CT, Monday-Friday. (202) 586-8800 National Energy Information Center U.S. Department of Energy Forrestal Bldg., EI-22, Room 1F048 1000 Independence Avenue, S.W. Washington, D.C. 20585

## Doing "More with Less" Energy Guru in Nebraska



Amory Lovins, co-founder of the Rocky Mountain Institute, was in Lincoln in February suggesting ways people and utilities could accomplish the same tasks and goals by using energy more wisely. "We are talking about doing more with less, getting the same services or better. Using less energy and more brains," Lovins said.

Lovins stop in the state was provided by the Energy Office and NMPP Energy. Lovins, pictured left and above, is discussing energy efficient lighting and windows with state energy director Bob Harris.

More of Lovins' comments will appear in the next *Quarterly*.

## Frequently Asked Questions...

# 5% Dollar and Energy Saving Loans

The *Nebraska Energy Quarterly* features questions routinely asked about 5% Dollar and Energy Saving Loans. Loan forms may be obtained from participating lenders or the Nebraska Energy Office.

### Are electric furnaces eligible for loans?

Generally, no. Electric furnaces, including baseboard or resistance-type heaters, cannot be financed with a low-interest loan. All electric-source furnaces are 100 percent efficient, so there are no energy savings realized when an older electric furnace is replaced with a newer one.

There are three exceptions, however.

1. An electric furnace, used in an auxiliary capacity and, in combination with a heat pump system meeting the performance standards listed on Form 2-C can be financed.

2. In emergency situations, when an electric furnace ceases to function and no other heating source is available and a lender requests prior approval from the Energy Office, an electric furnace replacement may be financed.

3. If energy savings (documented through an energy audit) indicate that the cost of the furnace would be recovered in 15 years or less, it may be possible to finance the purchase with a loan. Contact the Energy Office for more details on this option.

### What types of agricultural projects can be financed?

If the conditions of the loan program are met, almost any type of agricultural project may be financed. Previously financed projects are listed below, but almost any type of energy saving improvement will be considered.

Based on the type of improvement being planned, there are two different ways to proceed:

1. If the type of improvement is listed on Forms 2-A, 2-C or 2-D, it is "prequalified." Generally, these improvements are made to existing agricultural use buildings — adding insulation to a confinement building or machine shed, for example. If the improvement is this type, proceed with the normal loan process — get an estimate and contact the lender of your choice to apply for a loan.

2. Most agricultural projects, however, are not "prequalified" and will require an energy audit. Previously financed projects of this type include trenching machines, feed mixer wagons, low-pressure pivot irrigation systems, grain dryers, no-till planters and geothermal, solar or other energy saving livestock watering systems. If your project falls into this category, complete the energy analysis forms (#32 and #33) and send them to Kirk Conger at the Energy Office. Low-interest financed projects must pay for themselves in a certain number of years — 15 for building structures and ten for system or other improvements. If your proposed project is approved, the Energy Office will

send you an energy audit acceptance statement form (#6). Take the statement to the lender of your choice and proceed with the loan application process. The Energy Office will retain all of the documentation until your loan application is submitted by the lender. Work may not be started or contracted for until loan approval is issued.

### Do you need an energy audit to finance home appliances?

Generally, no. Refrigerators, freezers, clothes washers and dishwashers may be financed following the guidelines listed on the application form (#1). The guidelines list the maximum annual energy costs by appliance. When shopping, it is helpful to have the guidelines with you.

After you select the appliance you would like to finance, complete the application form, obtain a copy of the yellow appliance energy guide (or the dealer can provide a signed statement verifying the energy efficiency of the appliance) and proceed to the lender of your choice.

If the appliance you selected falls outside the maximum annual energy cost guidelines, it may be possible to finance it by completing the energy analysis forms (#32 and #33). However, the resulting energy savings must fully pay for the cost of the appliance within five years.

**Project Loans to date: 5,706 for \$32.5 million**

## World of Tomorrow...

# Is Space in Your Future?

The U.S. Department of Energy and the Public Broadcasting System are cooperating on a series of educational programs involving energy, science and math.

*Living and Working in Space*, one of the programs, examines habitats, growing food and medicine in space as well as cleaning up environmental debris currently orbiting earth. Interviews with space professionals including a doctor and the "lunar lettuce man" are featured. The program airs on NETV on Wednesday, March 31 at 8:00 pm.

Educational materials for teachers and students are available by contacting PBS at 1-800-344-3337.

### It's a Fact

According to the *New York Times*, 40 congressional committees and subcommittees have a say in any energy legislation under consideration.

While the original *Clean Air Act* (passed in 1970) was contained on one and one-half pages, amendments to the Act (passed in 1991) stretched 313 pages.

# Energy Taxes & Nebraskans: How Much and How Willing?

In February, President Clinton proposed a broad-based, phased-in energy tax. The energy tax would be based on the heat content of the fuel as measured in British thermal units or Btus. Starting in July 1994, all fuels (except oil) would be taxed at about 8.5 cents per million Btus. The tax on oil (except heating oil) would be about twice as high. Energy produced from renewable sources — solar, wind and geothermal — would be exempt. By the third year of the phase-in, 1996, taxes would have tripled from their 1994 level. Thereafter tax increases would be pegged to the rate of inflation.

"Prior to the President's announcement," said Energy Office Director Bob Harris, "there was considerable speculation about the type of energy tax which might be proposed — carbon, oil import, gasoline or some type of combination. Our analysis shows that of all the different types of energy taxes, the Btu tax is the fairest to all Nebraskans."

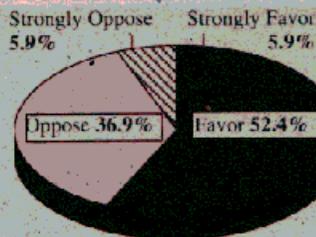
## Possible Nebraska Impact

If Congress approves the President's proposal, the Energy

### "Yes" to an Energy Tax For Certain Things

Over 57 percent of Nebraskans support a surcharge on energy bills according to a recent university survey conducted on behalf of the Energy Office. Seventy-five percent would be willing to pay an extra one percent on their utility bills. Both questions suggested the surcharge would be used for energy saving projects and research. The survey was developed prior to President

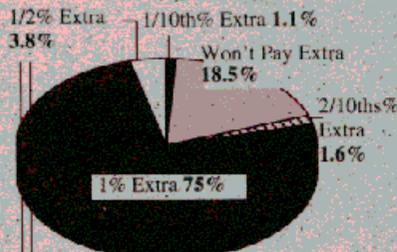
Favor/Oppose Surcharge on Energy Bills



Source: Nebraska Energy Office

percentages ranging from one to one-tenth, only 18.5 percent still objected to a surcharge. Generally, those most opposed to surcharges were 75 and older and those earning less than \$10,000 per year.

How Much Extra on Energy Bills



Source: Nebraska Energy Office

Clinton's call for a Btu tax. Nearly 43 percent were opposed or strongly opposed to a surcharge for any purpose. However, when presented with surcharge

**A Dollar A Month**  
Survey participants were told that the average residential electricity and natural gas bill for Nebraskans totaled \$100 every month. Three-quarters of the respondents said they were willing to pay an extra one dollar per month or one percent for energy saving projects and research.

The survey was conducted last fall by the Bureau of Sociological Research at the University of Nebraska.

Office has calculated the potential impact to the state's residents. On a per-capita basis, a Btu tax would directly cost about \$42 starting in 1994 and rise to \$127 by the end of the three year phase-in.

"At this stage, we've tried to project the impact of the tax on the best information available," said Harris. "However, there are few

'typical' families or 'average' amounts of energy used. What is quite clear is the more oil you use, the higher the impact of the tax will be."

Harris said that because the petroleum portion of the tax is twice as high as other forms of energy, states which use large amounts of gasoline and other

fuels to move people, goods and services will pay a higher price.

"Between 40 and 50 percent of the taxes will come from the transportation sector of the state's economy," Harris said. "I can't think of a better incentive to purchase a car that gets more miles per gallon or switch to other vehicle fuels."

The Energy Office estimated the energy tax on gasoline for vehicles from as little as \$7.15 to \$33.32 per vehicle in the first year. "Some people drive fewer than 5,000 miles a year, while others may exceed 30,000," said Harris. "The number of miles the car or pickup gets per gallon is also a major factor." The federal Department of Energy has said the proposed tax would add 7.5 cents per gallon by the last year of the phase-in.

## Editorial

"Clinton's [energy tax] plan could have beneficial side effects. It might encourage energy conservation, particularly since it taxes energy whose production generates pollution at a higher rate than 'cleaner' energy sources. The gasoline tax increase might inspire some drivers to purchase vehicles that get better mileage. It might encourage them to keep their vehicles tuned up and their tires adequately inflated, so that they use less fuel.

"It could encourage some farmers to consider more conservation-conscious farming methods, which can require fewer passes through the fields by heavy farm equipment."

Omanah World-Herald  
February 22, 1993

## Calculating Your Energy Tax

To estimate the effect of an energy tax on your wallet or purse, use the table below. Take the amount of each type of fuel used in a year and multiply by the tax. The resulting number should be an accurate estimate of the proposed tax for that year on that energy source.

Unit and Source of Energy	Taxes Per Unit		
	1994-95	1995-96	1996-97
Ton of Coal	\$1.50	\$3.00	\$4.50
Gallon of Gasoline	2.5¢	5.0¢	7.5¢
Gallon of Diesel Fuel	2.8¢	5.5¢	8.3¢
Gallon of Propane*	1.8¢	3.7¢	5.5¢
Therm (hundred cubic ft.) of Natural Gas	0.9¢	1.7¢	2.6¢
KWh of electricity	0.1¢	0.2¢	0.3¢

\* Calculated at the petroleum tax rate. At the lower rate of natural gas, the tax would be 2.4¢ per gallon in the third year.

Source: Associated Press; USA Today; The Wall Street Journal; Energy Information Administration; U.S. Department of Energy

## ...and the Cost to Agriculture

"One of the more difficult tasks is trying to calculate the impact of an energy tax on production agriculture," Harris said. The Energy Office has developed a crop-by-crop, region-by-region analysis of possible impacts. "The costs range from three cents to \$5.15 per acre once the tax is fully implemented," Harris said. "Trying to give illustrations or averages just isn't helpful to the state's growers."

The impact of an energy tax by region and by crop has been calculated using the Cooperative Extension Service's 1992 *Nebraska Crop and Livestock Budgets* is used as the source. The tax is

stated in dollars per acre. Energy tax estimates do not include transportation to market or custom operations costs.

Harris said that energy used for non-energy purposes such as chemicals and fertilizers, essential to agriculture, would be exempted from the tax.

For more information about the effects of an energy tax on agriculture or for a copy of the estimates, contact **Larry Kinyon** in the Energy Office.

### The Panhandle

<b>Highest</b> — Alfalfa hay irrigated by electric-powered pivot with a 230' head applying 25 acre-inches of water and producing 6 tons	<b>Highest</b>	<b>Tax</b>
Fuel .....	Diesel .....	\$0.99
Electricity .....		\$2.20
<b>Total .....</b>		<b>\$3.19</b>
<b>Lowest</b> — Alfalfa hay irrigated by gravity system applying 25 acre-inches of water and producing 6 tons	<b>Lowest</b>	<b>Tax</b>
Fuel .....	Diesel .....	\$0.03
Electricity .....		\$0.0
<b>Total .....</b>		<b>\$0.03</b>

### The North

<b>Highest</b> — Alfalfa hay irrigated with diesel-powered center pivot system with a 230' head applying 18 acre-inches of water producing 5 tons	<b>Highest</b>	<b>Tax</b>
Fuel .....	Diesel .....	\$3.84
Electricity .....		\$0.0
<b>Total .....</b>		<b>\$3.84</b>
<b>Lowest</b> — Native meadow hay with subirrigation producing 1.3 tons	<b>Lowest</b>	<b>Tax</b>
Fuel .....	Diesel .....	\$0.16
Electricity .....		\$0.0
<b>Total .....</b>		<b>\$0.16</b>

### The Northeast

<b>Highest</b> — Grain corn in sandy soils irrigated by diesel-powered pivot system with a 225' head applying 10 acre-inches of water producing 140 bushels	<b>Highest</b>	<b>Tax</b>
Fuel .....	Diesel .....	\$2.45
Electricity .....		\$0.0
<b>Total .....</b>		<b>\$2.45</b>
<b>Lowest</b> — Alfalfa seeding with cost-shared oats	<b>Lowest</b>	<b>Tax</b>
Fuel .....	Diesel .....	\$0.18
Electricity .....		\$0.0
<b>Total .....</b>		<b>\$0.18</b>

### The Southwest

<b>Highest</b> — Alfalfa hay irrigated by diesel-powered center pivot with a 305' head applying 18 acre-inches of water and producing 5.5 tons	<b>Highest</b>	<b>Tax</b>
Fuel .....	Diesel .....	\$5.15
Electricity .....		\$0.0
<b>Total .....</b>		<b>\$5.15</b>
<b>Lowest</b> — Continuous wheat with chemical weed control producing 30 bushels or continuous no-till grain sorghum following eco fallow corn or sorghum producing 70 bushels	<b>Lowest</b>	<b>Tax</b>
Fuel .....	Diesel .....	\$0.38
Electricity .....		\$0.0
<b>Total .....</b>		<b>\$0.38</b>

### The East Central

<b>Highest</b> — Continuous corn irrigated by electric-powered pivot system with a 305' head applying 10 acre inches of water producing 145 bushels	<b>Highest</b>	<b>Tax</b>
Fuel .....	Diesel .....	\$0.79
Electricity .....		\$1.15
<b>Total .....</b>		<b>\$1.94</b>
<b>Lowest</b> — Alfalfa hay for field stacking producing 3.5 tons	<b>Lowest</b>	<b>Tax</b>
Fuel .....	Diesel .....	\$0.27
Electricity .....		\$0.0
<b>Total .....</b>		<b>\$0.27</b>

### The Central

<b>Highest</b> — Grain corn irrigated by diesel-powered pivot system with a 305' head applying 12 acre inches of water producing 35 bushels	<b>Highest</b>	<b>Tax</b>
Fuel .....	Diesel .....	\$3.84
Electricity .....		\$ 0.0
<b>Total .....</b>		<b>\$3.84</b>
<b>Lowest</b> — Alfalfa hay with no irrigation system producing 3.5 tons	<b>Lowest</b>	<b>Tax</b>
Fuel .....	Diesel .....	\$0.06
Electricity .....		\$0.0
<b>Total .....</b>		<b>\$0.06</b>

### The Southeast

<b>Highest</b> — Corn silage irrigated by diesel-powered pivot system with a 305' head applying 8 acre-inches of water producing 20 tons	<b>Highest</b>	<b>Tax</b>
Fuel .....	Diesel .....	\$2.83
Electricity .....		\$ 0.0
<b>Total .....</b>		<b>\$2.83</b>
<b>Lowest</b> — Alfalfa hay for large round bales producing 3 tons	<b>Lowest</b>	<b>Tax</b>
Fuel .....	Diesel .....	\$0.03
Electricity .....		\$0.0
<b>Total .....</b>		<b>\$0.03</b>



## Beating an Energy Tax... Irrigation Scheduling Is Worth \$21 per Acre

Do you know an irrigator who would like to save over \$21 per acre in production costs? That's what University of Nebraska researchers say is possible by using irrigation scheduling during crop production.

Statewide total savings could reach \$122.5 million annually in energy and \$52 million in nitrogen fertilizer costs. These savings are possible if scientific scheduling with proper nitrogen and water management techniques were used on all of the state's irrigated acres. Savings estimates do not include any additional savings resulting from an energy tax.

### Savings of a Third

Surveys by the Agricultural Engineering department at the University show that irrigators using center pivot sprinkler systems around

Imperial and O'Neill saved 7.6 inches of water per acre or 35 percent. An equal amount of energy savings would also result.

The average amount of water used for surface irrigation is approximately 20 acre-inches per year in the state. However, University field lab research has shown that maximum corn yield can be achieved using only eight to eleven inches of irrigated water.

Nitrate leaching occurs when excessive amounts of water are applied and is more prevalent in sandy soils rather than those with a finer texture. Research indicates the amount of leaching varies from five to ten pounds of nitrogen per inch of excess water applied.

Contact the county extension agent in your area for more information about using efficient irrigation techniques.

EXTRA \$250 from page 1

cheapest loans of this type in the state. The funds for the loans came from two sources \$178,000 from oil overcharge dollars and \$199,500 from local financial institutions.

To date, 11 businesses and 74 homeowners have received low-interest loans totaling nearly \$350,000. Under two percent of the community's residents have taken out the popular loans. So, building a "plant" of this type takes time and even though the dollar savings are actual, they can be less visible. However, if all of Schuyler's residents take advantage of these loans, the savings could equal a "plant" employing a 60-person work force — larger than the town's current number two industry, Wagner Mills.

### Dollar Savings Mount Up

Energy Office studies show that savings from improvements of this type can be substantial — \$74 per year in natural gas costs and \$72 per year in electricity costs. Some types of projects yield even more dramatic savings — all electric homes showed savings of \$384 annually and replacement of natural gas furnaces yielded savings of \$84 per year.

### An Opportunity for Your Town

In February, Governor Nelson challenged the state's business leaders to invest in an Energy Office operated low-interest loan program which makes energy saving improvements to buildings and systems all across the state.

"In December, in announcing a state energy action plan," said Nelson, "I offered to commit an additional \$1 million in



oil overcharge funds to the Dollar and Energy Saving Loan program if the industries that

benefit will match, dollar-for-dollar, the state's new investment." The target group includes manufacturers, community development organizations, financial institutions, energy providers and others — basically those interested in economic development and energy efficiency.

According to the Energy Office, the state's oil overcharge investment of \$14.4 million has yielded over \$35 million of construction and remodeling activity. Initial demand projections exceeded \$100 million for just home improvement loans. "The demand for these low interest loans remains continuous and outstrips availability," said Nelson.

### 11,250 Jobs!!!

"While business openings, expansions, layoffs and closings grab the headlines," said the Governor, "it's on-going, job-creating activity like this that keeps the state's economy humming." Nelson said that people who have already taken advantage of the loans are realizing, on average, ten percent savings. "In 1992, Nebraska's total energy bill excluding transportation was over \$1.8 billion dollars," said Nelson. "A ten percent savings would pump at least \$180 million into the state's economy, an equivalent of adding in excess of 11,250 jobs."

The loans finance energy saving improvements in homes, businesses, farms and ranches, government buildings and

nursing homes. To date, the most frequently made improvements are replacing furnaces, air conditioners, windows and adding insulation in homes. The most popular agricultural improvement is pivot irrigation system modifications. The loan program was begun in mid-1990.

The Governor asked interested business leaders to contact John Osterman in the Energy Office for details about the dollar-for-dollar challenge to the state's businesses.

### Changing with the Times...

## Central's Circuit Rider Adds Stops

One of the keys to effective government programs is flexibility — a capability to change with the times while meeting the needs of those using the services. The energy management circuit rider based at the Columbus campus of Central Community College is one such example.

Started in 1990 with \$400,000 in oil overcharge funds, two riders — one in Columbus and another in North Platte — provided assistance to cities, counties, school districts, hospitals and nursing homes to develop energy management programs, identify necessary energy improvements and utilize energy accounting systems. A goal of the pilot effort was to discover if customers would be willing to pay for money-saving energy services. In Central's case, the answer was yes. Building managers who initially used the service, saw energy cost savings between ten and forty percent.

### Making It Work

The Columbus-based college discovered this service niche had the potential of becoming not only financially self-supporting, but held the potential for offering similar services to its customers.

Nebraska Public Power District has contracted with the college to offer training for maintenance personnel and utility employees on keeping energy equipment operating at peak efficiency. NMPP Energy (an association of municipal electric and natural gas systems) has also contracted with the circuit rider program to provide commercial audits in their member communities.

### And New Directions, Too

With a nearly \$63,000 grant, the college will also establish an alternative fuels training and education program. Natural gas, propane and ethanol groups contributed the funds. The effort will create an alternative fuels certification program for automotive technicians and train faculty to offer similar training across the country. Additionally, alternative fuels programs will be presented at schools and community organizations and an annual alternative fuels conference will be established. The college hopes to become a leader in alternate fuels education.

For more information about these programs, contact Doug Pauley at Central Community College at (402) 564-7132.

A Summary...

# An Energy Action Plan for Nebraska

Governor E. Benjamin Nelson appointed 52 Nebraskans to the Nebraska Energy Policy Council in April, 1991. He directed the Council members to use their expertise, to solicit suggestions from other Nebraskans and to make recommendations for the state's first comprehensive energy policy plan.

Citizen involvement was the cornerstone in the development of recommendations. The Energy Policy Council compiled these ideas into the *Nebraska Energy Policy Plan—Recommendations to the Governor*, which was given to the governor in January 1992.

The feasibility, cost, effectiveness and potential savings of each of the recommendations were assessed by the Energy Office. Based upon this comprehensive assessment, *An Energy Action Plan for Nebraska* was developed by the Energy Office and proposed to the governor in November 1992.

Announced by the governor in December 1992, *An Energy Action Plan for Nebraska* brings together the citizen recommendations with the goals, objectives and action plans that were developed to meet present and future energy needs.

*An Energy Action Plan for Nebraska* serves as the first step in an ongoing process to advance the conservation and efficiency of traditional, non-renewable energy sources; encourage the development of alternate and renewable energy sources; and further energy-related economic development activities. The responsible use of energy resources will benefit all Nebraskans through energy and dollars saved, job opportunities expanded and more successful competition in world markets.

The *Energy Action Plan* contains two initiatives. The first initiative affects state government. It includes nine objectives to improve the use of energy throughout state government beginning with a special focus on transportation, buildings, landscaping and interagency coordination.

The second initiative affects private businesses and local governments. An additional eleven objectives outline action steps to increase energy efficiency in the private and local government sectors beginning with a special emphasis on buildings, transportation, education, information and economic development.

On this and the next page is a summary of specific goals and objectives included in *An Energy Action Plan for Nebraska*. For a complete copy, contact Jerry Loos in the Energy Office.

## Initiative Affecting State Government

State government will lead by example to ensure the efficient, economic and environmentally responsible use of energy throughout state government.

### Transportation

**Goal:** Increase substantially the number of alternative fueled vehicles operating within the state by the year 2000.

**Objective 1:** Beginning in 1993 (model year 1994), ten percent of the light duty motor vehicles (excluding law enforcement and emergency vehicles) purchased by the state will operate on alternative fuels. Minimum annual percentages for purchases will increase annually up to 75 percent for model year 2000 and thereafter.

**Objective 2:** Over the next two years, state government will make provision where necessary for the fueling of alternate fueled vehicles in its fleet.

**Objective 3:** Develop a comprehensive state alternative fuels and vehicle incentives plan designed to accelerate the introduction and use of such fuels and vehicles.

**Goal:** Achieve efficient use of transportation.

**Objective 4:** The rideshare roster developed by the Energy Office for use by state employees commuting from Omaha to Lincoln will be expanded to cover employees commuting to Lincoln from other locations such as Beatrice, Crete, Seward and York.

**Objective 5:** Increase state agency use of telecommunications in educational and conferencing activities to substitute for travel.

### State Buildings

**Goal:** State government will achieve maximum efficiency of energy use in all its existing buildings.

**Objective 6:** Require agencies responsible for state-owned buildings to adopt a comprehensive energy efficiency program.

### Landscaping

**Goal:** Reduce energy use in state-owned buildings, the maintenance cost of planted areas surrounding them and the maintenance cost of highway rights-of-way through the use of energy efficient, low maintenance plantings and xeriscaping techniques.

**Objective 7:** Over the next ten years, the land areas surrounding state-owned buildings will be converted to low maintenance plants and



Continued on next page

grasses in the course of regular maintenance and replacement. Trees and shrubs which are replaced will be situated to enhance energy efficiency in buildings. Mulch will be systematically used to reduce water use.

**Objective 8:** Over the next ten years, as part of the regular maintenance and replacement program, road rights-of-way will continue to be maintained in low maintenance plants. As rights-of-way are reseeded, low maintenance plants requiring little mowing will be used.

### Interagency Coordination

**Goal:** Foster and promote interagency cooperation and coordination to increase state government efficiency and to achieve energy policy goals and objectives.



**Objective 9:** Identify state agencies whose activities are naturally related to energy and encourage them to integrate energy issues into their programs.

### Initiative Affecting Private Businesses and Local Governments

State government will facilitate increases in energy efficiency in the private and local government sectors.

#### Transportation

**Goal:** Provide incentives for the purchase and conversion of vehicles to operate on alternate fuels.

**Objective 10:** State government will facilitate and/or provide incentives for local governments including public schools, for the acquisition of alternate fueled vehicles, installation of alternative fuel refueling facilities and conversion of vehicles to alternate fuels.

**Objective 11:** Provide low cost financing for the conversion of public and private fleet vehicles to operate on alternate fuels and the purchase and installation of required fueling facilities.

**Objective 12:** Establish an Alternate Fuels Advisory Committee to develop strategies which assist Nebraskans to decrease their use of petroleum products, thereby enhancing national security and reducing the state's reliance on imported petroleum. Using alternate fuels produced in this state also enhances economic development.

**Objective 13:** Increase private sector and local government participation in telecommunications throughout the state.

#### Buildings

**Goal:** Increase energy efficiency of new construction.

**Objective 14:** Formulate a state-developed energy

building code for new and retrofit construction which is affordable, cost-effective, user-friendly and enforceable.

**Objective 15:** Through legislation, adopt the state-developed energy building code, establish an enforcement mechanism and establish a periodic update system.

**Goal:** Increase the energy efficiency of existing buildings.

**Objective 16:** Remove statutory language which impedes participation by public entities in state operated energy saving loan programs.

**Objective 17:** Increase the energy efficiency of public buildings owned and operated by local governments.

#### Education and Information

**Goal:** To provide timely and reliable information and education opportunities to help Nebraskans learn about energy and make good decisions regarding their energy costs and use.

**Objective 18:** Establish a Nebraska Energy Education and Information Center within the Nebraska Energy Office as a means to centralize, organize and disseminate energy education and information resources to the general public.

#### Economic Development

**Goal:** Utilize energy efficiency strategies to strengthen Nebraska's economy and contribute to the state's ability to compete in world markets.

**Objective 19:** Use the Dollar and Energy Saving Loan Program as an effective energy efficiency strategy and economic development tool.

**Objective 20:** Utilize the Nebraska Development Network to promote energy efficiency as an effective economic development tool.



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