

Nebraska ENERGY

Do You Know
Someone
in Need?
See Page 23

Q U A R T E R L Y

Nebraska Energy Office

Spring 1992

In Des Moines in June...

Rural Energy Conference



Ten states, including Nebraska, and the U.S. Department of Energy are sponsoring a three-day conference, "Energy in Rural America: Profits and Opportunities" in Des Moines from June 1-3. The first day will feature two half day tours of area farms using energy efficient methods. The remaining two days of the conference will offer 27 different sessions in three areas — New Trends in Agriculture, Fuels and Utility Issues, several plenary sessions and a product and technology exhibit.

An Early Peek

The organizers have tentatively scheduled the following topical sessions:

- | | |
|--|--|
| <p>New Trends in Agriculture</p> <ul style="list-style-type: none"> • Integrated Farm Management • Wind Energy Systems • Agriculture Economics and Incentives • Renewable Energy Alternatives • Irrigation Alternatives • Soil and Water Quality • Cropping Efficiency | <ul style="list-style-type: none"> • Livestock Efficiency • On-Farm Efficiency • Equipment Efficiency <p>Fuels</p> <ul style="list-style-type: none"> • Ethanol From Corn • Economic Benefits of Ethanol • Ethanol from Other Feedstocks • New Engines Using Ethanol |
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See CONFERENCE on Page 6

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Inside

A Kilowatt-hour	6
Energy Policy Plan to Governor	5
Five Courthouses Become Models	4
5% Dollar and Energy Saving Loans	4
Governors' Ethanol Coalition Meets	5
Information Services	6
36,000 Homes Weatherized Free	2

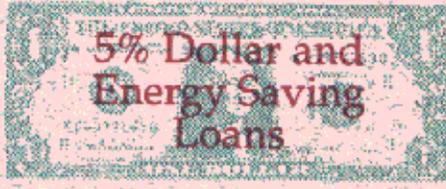
Multi-Family Rentals...

New 5% Loans for Energy-Saving Improvements

With the receipt of a \$50,000 federal incentive grant from the U.S. Department of Energy, 5% Dollar and Energy Saving Loans are now available to landlords whose tenants are eligible for the Low Income Weatherization Assistance Program (See pages 2-3 for income and other information). The Energy Office has added \$50,000 in Exxon Oil Over-charge Funds to this effort. It is anticipated that private lenders in the state will match these funds with an estimated \$90,000-\$100,000; for a total loan pool of \$190,000-\$200,000. As the loan payments are made, those repayments would then be available for making loans to different individuals.

Changing Times

Because of modifications in federal and state rules, landlords owning multi-family housing (two or more units in the same building), will be required to pay half the cost of weatherization improvements starting in April of 1992. As



a result, this expansion of the Dollar and Energy Saving Loan Program will primarily be limited to

multi-family housing units except that replacement furnaces in single-family rental homes will be able to be financed with these low-interest loans.

Free Energy Audits

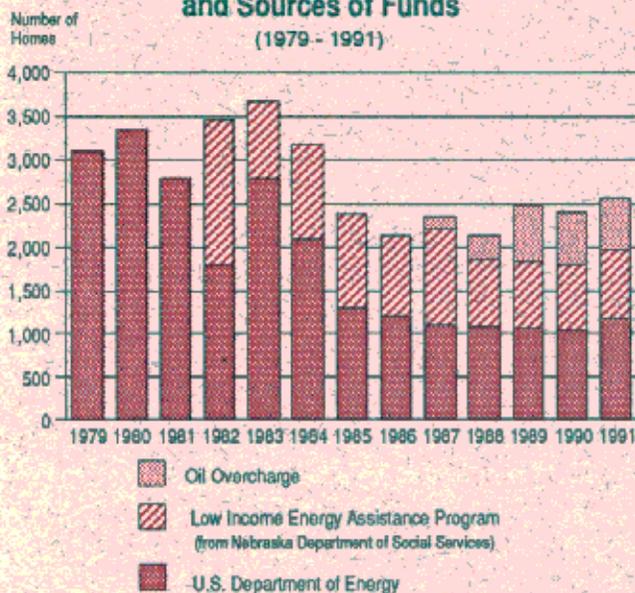
Under the Weatherization Assistance Program, homes are tested or analyzed to determine the most cost-effective improvements. With this effort, multi-family structures will be audited — energy-wise, identifying the best and most energy saving improvements. Next, the results will be shared with the owner. The cost of the improvements will be determined and the Energy Office Weatherization Assistance Program will contribute one-half of the total. The balance owed by the landlord could be financed with a 5% Dollar and Energy Saving loan available at over 400 lender locations across the state. For more information about this new loan program, contact Pete Davis in the Energy Office.

Thirteen Years of Benefits...

36,000 Homes Weatherized Free in Nebraska

Since the Low-Income Weatherization Assistance Program was created in 1976 and through 1991, 35,875 homes occupied by low-income elderly, disabled and others have been weatherized free of charge across the state. Yet, even after operating for 13 years, an estimated 65,000 homes remain to be weatherized in Nebraska.

Number of Homes Weatherized and Sources of Funds (1979 - 1991)



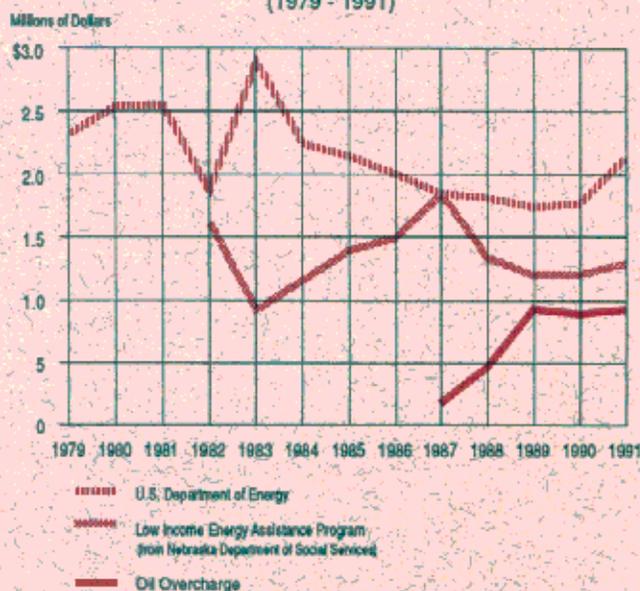
\$43.9 Million Spent in 13 Years

In 13 years, three sources of funds — two federal and a state trust fund from a series of court settlements with oil companies — have provided \$43.9 million for the program. Federal funds from the U.S. Department of Energy peaked in 1983 at \$2.8 million. By 1991, the Energy Department supplied \$2.4 million, a 14 percent decline from 1983.

Thank You, Social Services!

Under an agreement with the state's Department of Social Services, up to 12 percent of the U.S. Department of Health and Human Services' Low Income Home Energy Assistance Program funds are transferred annually to the Energy Office-administered Weatherization Assistance Program. These funds have fluctuated from a low of \$877,498 in 1983 to a peak of \$1.778 million in 1987. However, the funds have declined to approximately \$1.3 million annually in 1991. From an energy conservation

Weatherization Funding Sources (1979 - 1991)



standpoint, diversion of these funds to the Weatherization Program is desirable because the energy saving home improvements result in a permanent reduction in energy use. Normally, these funds are used as a quick fix to pay for heating and cooling bills. Thus, a person who receives assistance to pay a utility bill could face the same situation year after year.

Differences — Yesterday and Today

In the first several years of the program, only minimal energy conservation improvements were made in the homes. While effective and inexpensive, the improvements like caulking, weatherstripping, repairing holes and broken windows were labor-intensive and less than permanent. In 1979, the average amount spent on each home was \$796.

In the next several years, more permanent improvements like wall insulation and storm windows replaced the less durable caulking and weatherstripping as the recommended types of improvements. Not only were the improvements longer lasting, as a result, more and better materials

"The improvement in my house is worth noting, as it remains cooler in the summer. As well as personal savings, the result of the Weatherization Trust, Inc. (An Energy Office program contractor), is a program which supports the country's growing consciousness of the importance of energy conservation. All in all, it's a high quality program employing good people. Thank you."

With appreciation,
An Omaha client

could be used on each home. By 1984, the average cost per home had risen to \$1,021 with \$600 being spent on materials.

Income Guidelines Effective February 14, 1992

Household Size	Weatherization Assistance Income Guideline*
1	\$8,853.00
2	\$11,947.00
3	\$15,041.00
4	\$18,135.00
5	\$21,229.00
6	\$24,323.00
7	\$27,417.00
8	\$30,511.00
Each additional member add	\$3,094.00

* What is and is not defined as income may determine if you can receive this service. Please check with the nearest service provider listed in the box below for more details.

The next five years brought the greatest number of changes since the program started:

- Storm windows were eliminated as one of the possible improvements by 1986.
- Starting in 1985, a more thorough analysis was performed on each home trying to identify only the most cost-effective improvements. By 1989, state-of-the-art "blower door" technology was being utilized to maximize identification of the optimum improvements to be made on each home.
- The repairing and servicing of heating systems was added during 1987-89, with entire furnace replacement a possibility in certain instances.
- Most recently, all homes being inspected for free weatherization services received a "blower door" analysis and all furnaces were given efficiency inspections. The goal remains trying to find the best combination of improvements which will reduce energy use and costs.

I would like more information on the Low-Income Weatherization Assistance Program. Please contact me.

Name _____
 Address _____
 City _____ Zip Code _____
 Daytime Phone Number (_____) _____
 Area Code _____

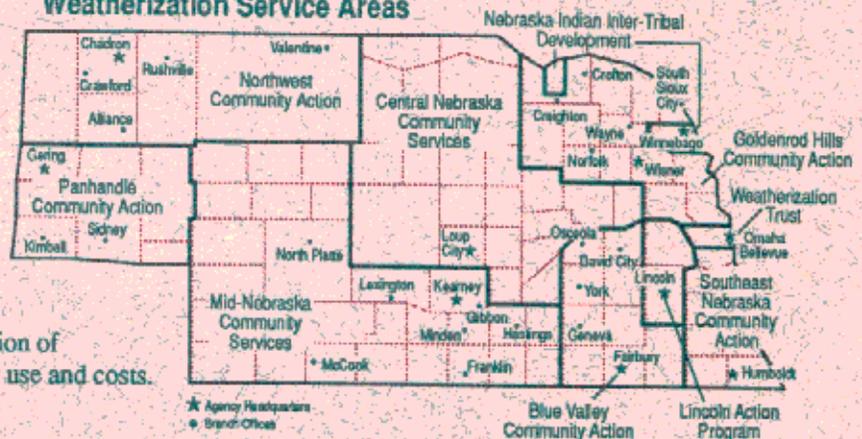
Please send this form to the organization (See map and address listings in the box below) serving your county.

How to Get Free Home Weatherization

Free home weatherization services are offered through eight community action agencies, one non-profit and a Native American organization at 35 offices throughout the state. For further information about free home weatherization services, contact the organization (see map and address listing below) providing services in your area.

Because the services are not available to all Nebraskans, income qualifications are used in determining who receives this free service (see Income Guidelines in column at left). People who currently qualify for Aid to Dependent Children (ADC) or Supplemental Security Income (SSI) automatically qualify for free weatherization.

Weatherization Service Areas



Nebraska Low-Income Weatherization Assistance Program Organizations

Blue Valley Community Action, Inc.
 P.O. Box 273
 Fairbury, NE 68352
 (402) 729-2278

Central Nebraska Community Services
 P.O. Box 509
 Loup City, NE 68853
 (308) 745-0780

Goldenrod Hills Community Action Council
 P.O. Box 280
 Wisner, NE 68791
 (402) 529-3513

Lincoln Action Program
 2202 South 11th Street
 Lincoln, NE 68502
 (402) 471-4515

Mid-Nbraska Community Services
 P.O. Box 2288
 Kearney, NE 68848
 (308) 234-2591

Nebraska Indian Inter-Tribal Development Corp.
 Rural Route 1, Box 66-A
 Winnebago, NE 68071 (402) 878-2242

Northwest Community Action
 300 West 2nd Street
 Chadron, NE 69337
 (308) 432-3393

Panhandle Community Services
 3350 10th Street
 Gering, NE 69341-1700
 (308) 635-3089

Southeast Nebraska Community Action Council
 P.O. Box 646
 Humboldt, NE 68376
 (402) 862-2411

Weatherization Trust Inc.
 2111 Douglas Street
 Omaha, NE 68102
 (402) 342-1611

Frequent Questions...

5% Dollar and Energy Saving Loans

The Energy Office receives numerous inquiries on various aspects of the 5% Dollar and Energy Saving Loans every day. In an effort to keep you and other readers informed regarding the status of loan issues, changes in loan procedures and other items, each issue of the *Nebraska Energy Quarterly* will feature questions which are routinely asked about the loans.

Can an improvement be started or any items purchased before the Energy Office approves a loan?

No. Work may not be started nor any items purchased prior to the Energy Office's approval of the loan. The Energy Office must be certain (1) the proposed improvements and equipment meet the loan program's energy conservation standards and (2) state loan funds are available to finance the loan.

Starting an improvement before Energy Office loan approval automatically disqualifies the project from being financed with a 5% loan. However, if a borrower has an emergency situation (see the next question and answer), verbal approval for installation of the equipment may be given by the Energy Office prior to the processing of the loan application.

What are emergency situations?

Very few situations qualify as emergencies under the loan program.

During the winter, if your furnace is "red-tagged", shut-off, unsafe or not working and non-repairable, the Energy Office may consider this an emergency situation. To request verbal approval for a loan under these conditions, contact the lender who will supply information to the Energy Office for consideration. After reviewing the situation, the prospective borrower's lender is contacted with approval, recommendations for modifications, or denial. Normally, this process can be concluded in one day.

During the summer, air conditioning unit replacement may be considered. In this situation, the existing unit must be inoperative and necessary for medical reasons. The same procedure used in the winter for furnace replacement is followed. Additionally, the medical condition must be verified by the borrower's physician.

Can siding or roofing projects be financed with a loan and is an energy audit required to prove energy savings?

Both siding and roofing may be financed with a 5% loan under very limited conditions. In both cases, additional insulation must be added to the walls or ceilings/attic.

For walls, insulation with an R-Value of 10 or higher must be added to the outside walls. Generally, this involves installing rigid foam insulation of 1" thickness or greater to the existing exterior walls. The siding is then attached to the walls, protecting the insulation. Every siding project is reviewed by a staff engineer for compliance with the qualifications. An additional form (34) must also be completed.

Roofing projects must add insulation of at least R-30 or

more to the attic. Secondly, the current roof must be in very poor condition, needing complete repair or replacement.

Energy audits for roofs or siding are not required if these conditions are met.

Is the loan program out of money?

No. The loan program will be operating until 2001 and possibly longer. Additional funds to finance loans become available every month, principally from loan repayments. It is true that the demand for financing by homeowners and small business or nonprofits has exceeded available funds from time to time. Delays in funding loans have ranged from 15 to 90 days and sometimes longer if the original application information was inadequate.

Does the Energy Office inspect projects financed with a Dollar and Energy Saving Loan?

Yes. A percentage of randomly selected projects financed with the loans are inspected every month. During these inspections, which are arranged for in advance, both lenders and borrowers are contacted by Energy Office staff to assess the effectiveness of the improvements, the level of energy and dollar savings and other matters. Energy Office staff also verifies that materials and equipment were installed as described in the loan application.

Additional questions about 5% loans may be directed to **John Osterman, Jody Johns or Julie Gockley** at the Energy Office.

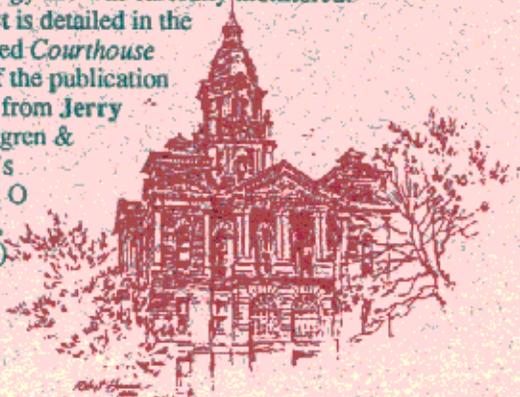
Saving Nebraska's Landmarks...

Five Courthouses Become Energy Saving Models

Five historically significant courthouses in Antelope, Gosper, Hamilton, Kimball and Pawnee counties have completed a five year energy conservation project funded with \$622,227 in Exxon Oil Overcharge funds and \$166,669 in local tax dollars.

The five were selected from 25 counties which had applied for the grants in 1987. From 1988 through 1990 energy audits were performed and planned improvements selected and installed. In the year following completion of the projects, energy use was carefully monitored.

Each project is detailed in the recently published *Courthouse Trail*. Copies of the publication can be obtained from **Jerry Berggren, Berggren & Woll, 303 Gold's Galleria, 10th & O Streets, Lincoln, NE 68508, (402) 475-0597 or Kimberly Brown** in the Energy Office.



Governor Nelson Chairs...

Governors' Ethanol Coalition Meets

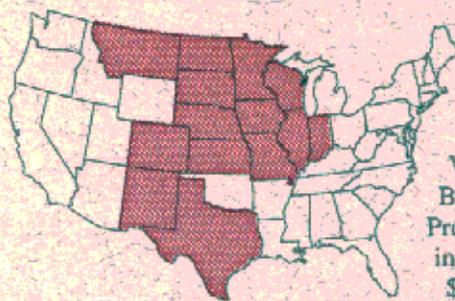
At a series of meetings in early February, the Governors' Ethanol Coalition, chaired by Governor Nelson of Nebraska, took action on several fronts including meeting with the heads of the U.S. Departments of Agriculture and Energy and the Environmental Protection Agency.

USDA, DOE and EPA to Cooperate

Nelson and Governor Edgar of Illinois, the Coalition's Vice-Chair, secured a pledge to cooperate with the Coalition from Secretaries Madigan of Agriculture and Watkins of Energy and Administrator Riley of the Environmental Protection Agency. Both Energy and Agriculture have pledged \$30,000 and \$15,000 respectively, for the Coalition's activities. Proposals for use of the funds will be

considered by member states at a future meeting. An additional \$10,000 has been received from the Western Regional Biomass Energy Program. Riley indicated that a \$250,000 study would be con-

Governors' Ethanol Coalition Members



ducted to discover if ethanol produces ozone destroying emissions which could reduce its marketability in portions of the country.

U.S. Department of Energy staff suggested that Coalition member states pool alternative-fuel vehicle orders with the federal government to reduce ordering problems with manufacturers. A concern was also expressed that state-funded research not duplicate that being done by any of the three federal agencies. To avoid this from occurring, the National Renewable Energy Laboratory will list state research endeavors in its national Alternative Fuels Data Center's computer data base.

50% More Ethanol in '95?

In a policy statement expected to be adopted soon, the Coalition may set a national goal of increasing the market share of ethanol blends in the country by 50 percent by 1995. To achieve the goal, an increase in production and sales must occur which could be aided, in part, by a one cent or more per gallon exemption in state gasoline taxes. Other portions of the policy statement are expected to define the Coalition's activities in the future.

NGA Adopts Energy Policy

The National Governors' Association at its winter meeting adopted a resolution calling for a national energy

policy increasing the use of the alternative fuels. The resolution recommends that the federal government, "immediately adopt a strategy that supports environmentally acceptable development and use of domestic energy sources, including natural gas, methanol, fuels such as ethanol derived from renewable biomass, clean coal, nuclear, oil from stripper wells and renewable energy sources."

The Coalition's next meeting is scheduled for April 30 and May 1, 1992 in Kansas City. For additional information about the Governors' Ethanol Coalition, contact Bob Harris or Larry Pearce in the Energy Office.

The Energy Policy Council's...

Energy Policy Plan to Governor

The Nebraska Energy Policy Council has completed its work and submitted its recommendations to Governor Nelson. Corrinne Pedersen, chair of the 52-member council, presented the Governor with *The Nebraska Energy Policy Plan: Recommendations To The Governor* at a press conference on January 15th. The recommendations address energy issues in agriculture, buildings, education, electricity, fossil fuels, renewables, research, transportation, waste and suggests some financing opportunities.

Governor: New Opportunities

"The work of the Council is greatly appreciated. I know the long hours and diligence it took to produce this list of energy options," said Governor Nelson. He also commented that the plan would not rest on a shelf, but would be used to develop opportunities for Nebraska to become more energy efficient.

Ms. Pedersen thanked the Governor for his leadership in seeking the recommendations and highlighted the fact that the Council looked at energy in the broadest sense. "We know that some recommendations may apply to some areas of the state and not others. But it is important to consider how our use of energy effects all Nebraskans," said Pedersen.

Fall Assessment

Governor Nelson announced that he has directed the Energy Office to complete a detailed assessment of the recommendations by early fall. The assessment will examine the cost, cost effectiveness, workability and feasibility of each recommendation. This assessment will form the foundation of future energy plans for the state.

Copies of the Council's policy plan are available by contacting Allison Meyer in the Energy Office.



How Long Is It...

A Kilowatthour

To visualize a Kilowatthours (kWh), let's relate it to the amount of work done by a person. In the home, a person would have to beat a batter mixture at an incredible speed, steadily, for ten hours to generate energy of one kWh.

Using an old-fashioned treadle sewing machine, a person would have to pedal at top speed for 13 hours to generate energy equal to one kWh.

A person shoveling a foot of snow off a ten-foot wide driveway, does about 23 foot-pounds of work per shovelful (assuming one cubic foot of snow equals six pounds per shovelful). A person would have to clear a driveway two miles long to generate energy equal to one kWh.

Imagine a 150-pound person climbing a 1,000-foot-flight of stairs. He or she would have to climb the stairs nearly 18 times to generate enough energy equal to one kWh.

Using these comparisons, it becomes obvious that paying for a kWh of electricity is still far and away the biggest bargain in anybody's budget.

In fact, a *USA Today* survey found that 34 percent of all Americans feel electricity was the greatest invention of all time; the next closest was the wheel at 11 percent.

— Reprinted from the Nebraska Municipal Power Pool's *Energy News*.

CONFERENCE, Continued From Page 1

Fuels (continued)

- Crop Residues to Energy
- Other Fuels
- Trees to Energy
- Biomass Conversion Technology
- Residential Application of Biomass

Utility Issues

- Demand Side Management (DSM) and Integrated Resource Planning (IRP): Understanding the New Alphabet Soup
- Structuring DSM/IRP Programs for Rural Communities
- Community Based Energy Programs
- Renewables: Environmental Aspects and Cost-Effectiveness
- Energy Audits for Farm, Commercial and Small Industry
- On-Site Technologies: Grain Drying
- On-Site Technologies: Ventilation, Exhaust Fans and Motor Efficiency
- On-Site Technologies: Lighting, Photovoltaics and Heat Pumps

The Specifics & The Bucks

Registration prior to May 15, is \$85; after May 15, \$95. Registration includes two breakfasts, two lunches, one dinner and one reception. The tours on June 1st are \$20 for one or \$35 for both. Room rates at the conference hotel, the Embassy Suites, range from \$59-\$89/night. Room reservations must be made separately by calling (515) 224-1700. For additional conference information or registering, contact Gail Ettinger, Energy in Rural America, 309 Davis Street, Evanston, IL 60201, Phone (708) 864-5651, Fax (708) 864-7535.

Answers to Your Energy Questions...

Information Services

CAREIRS The Conservation and Renewable Energy Inquiry and Referral Service answers questions at no charge. Renewable Energy Information
(800) 523-2929 P.O. Box 8900
Silver Spring, MD 20907

CAREIRS is offering two new free publications, *Learning About Renewable Energy* (FS 189) — designed for elementary and junior high students — and *Home Energy Audits* (FS224). Please refer to the number in parentheses when ordering a publication from CAREIRS.

NATAS The National Appropriate Technology Assistance Service offers free technical and commercialization assistance. NATAS
(800) 428-2525 U.S. Department of Energy
P.O. Box 2525
Butte, MT 59702-2525

NREL/TIS The National Renewable Energy Laboratory/ Technical Inquiry Service offers technical solar information for scientific and industrial professionals.
(303) 231-7303 Technical Information Service
National Renewable Energy Laboratory
1617 Cole Boulevard
Golden, CO 80401

NEIC The National Energy Information Center in the Energy Information Administration provides data and projections on energy production, consumption, prices and supplies. National Energy Information Center
(202) 586-8800 U.S. Department of Energy
Forrestal Bldg., E1-22, Room 1F048
1000 Independence Avenue, S.W.
Washington, D.C. 20585

The Energy Office is offering a new FREE publication, *Tips for Energy Savers*. It features hundreds of helpful dollar and energy saving suggestions on heating and cooling systems, appliances, vehicles, lights and more. Contact Jerry Loos in the Energy Office for a copy.

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