



Governor Nelson Wins Energy Efficiency Award

In December the National Association of State Energy Officials named Nebraska Governor Ben Nelson and Vermont Senator James Jeffords as co-winners of the 1996 Energy Efficiency Advocate Award.

"It is always gratifying to be recognized for doing what needs to be done," Nelson said. "Energy efficiency is one of the easiest ways this nation can reduce its reliance on oil imports."

The national energy group has members from 54 states and territories and presents the award annually to a person who has demonstrated their commitment to a sound energy policy.

According to the Association, Nelson was selected as a co-recipient because of his commitment to the Nebraska Energy Office, a balanced national energy policy and for his work in domestic oil, natural gas and alternate fuel organizations.

Getting to Zero Won't Be Easy...

Congressional Budget Office Lists Future Energy Spending and Taxing Options

In August, Congress' budget agency listed more than 200 budget cutting and tax raising options as possibilities for dealing with an estimated \$375 billion deficit between 1997 and 2002, if a balanced federal budget is to be reached. Eighteen of the taxing and spending options related to energy.

Since federal budgets are approved annually, any of these energy options, as well as other options outlined in the report, could be considered by the House and Senate in 1997 and in future years.

Several of the tax options outlined would supply most, but not all, of the needed revenue to close the budget deficit.

Some of the taxing and spending options would have particular impacts on some or all Nebraskans, especially the broad-based tax options as well as changes in federal electricity sales. Congress will start considering these budgetary options in January.

Tax Options

Eight of 40 different tax raising options focused on energy. Establishing new taxes as well as options eliminating current tax exemptions were identified. Several of the options have been previously considered by Congress.

The taxing options listed in the report could generate between \$2.9 billion and \$189 billion by 2002.

👉 **Repeal Tax Preferences for Extractive Industries.** This proposal includes minerals such as gold, uranium and sand as well as oil and natural gas production. A \$6.8 billion savings over six years is estimated if favorable tax treatments were eliminated. The proposal analyzed eliminating expensing for exploration and drilling as well as percentage depletion.

The analysis also suggests that favorable treatment may be warranted since oil and natural gas are considered essential to national energy security. However, favorable treatment increases current production -- lowering oil and gas imports -- at the expense of future production.

👉 **Repeal the Partial Exemption for Alcohol Fuels from Excise Taxes on Motor Fuels.** Currently, ethanol and ethyl tertiary butyl ether, or ETBE, is exempted from a portion of the 18.3 cents per gallon tax on gasoline. The exemption is 5.4 cents per gallon. Repealing this exemption would raise \$1.9 billion over three years before the exemption, under current law, expires. The Congressional study assumed the exemption would continue beyond 2000.

👉 **Impose a Broad Based Energy Tax.** Three different options were presented:

- **A Carbon Tax.** Imposing a \$20.50 per ton tax on the carbon content of fossil fuels — coal, oil and natural gas — would raise \$125.5 billion over six years.
- **A Btu Tax.** Imposing a tax of 35 cents per million British thermal units would raise

Continued on page 2

INSIDE THIS ISSUE

Doing the Right Thing Can Pay Dividends 3

Dollar and Energy Saving Loans Win National Award 4

First 85 Percent Ethanol Pump Opens In Lincoln 5

Information Resources and Services 6

Marginal Oil and Natural Gas Wells Generate \$47 Million in Nebraska 4

Test Your Energy Knowledge 6

\$126.1 billion over six years. In 1993, the House of Representatives passed a version of this tax. However, the Senate did not approve the tax.

- **An Ad Valorem Tax.** Imposing a retail tax on all forms of energy would net \$125.4 billion over six years.

The three different approaches yield nearly the same amount of revenue over the six year period, but have dramatically different effects on geographic regions and income levels. Imposition of some of the taxes could result in encouraging fuel substitution — from pollution-producing fossil fuels to renewables.

- ☞ **Increase Taxes on Petroleum and Motor Fuels.** Three vastly different tax options were evaluated. All tax options would raise significant amounts of revenue, encourage conservation, reduce pollution and decrease the nation's reliance on foreign oil. Currently, imports meet half the petroleum needs of the nation.

- **A Domestic and Imported Oil Tax.** Imposing a \$5 per barrel excise tax on all oil would raise \$103.8 billion in six years. A tax of this size would raise gasoline or heating oil prices by an estimated 12 cents a gallon.
- **An Imported Crude and Refined Oil Tax.** An oil import fee of \$5 per barrel would raise \$63 billion over six years. Price increases of petroleum products would be about the same as the tax on all oil option, except about half the revenue raised would not go to the federal government, but to American oil companies.
- **Increase Motor Fuel Taxes.** Raising the current federal tax of 18.3 cents a gallon an additional 12 or 50 cents —phased in over the period — would produce \$72.2 billion or \$189 billion, respectively, over the six years.

Spending Cuts

Of the 160 budget cuts analyzed, the Budget Office considered reductions or elimination of ten different energy programs. If all ten options were passed, just slightly more than \$23 billion would be saved over the six years — less than seven percent of the anticipated budget deficit.

Several of the budget cutting options have been previously considered by Congress and rejected and others would be of particular interest to Nebraskans.

- ☞ **Reduce Basic Energy and Materials Sciences Research.** The U.S. Department of Energy conducts general science, nuclear fusion, basic energy science and biological and environmental research at national laboratories. The Budget Office said cutting research by 25 percent would save \$4.6 billion over six years.
- ☞ **Eliminate Nuclear and Fossil Fuel Research.** The Department of Energy also conducts applied energy research in the fields of nuclear power technology and efficient and environmentally sound ways to use fossil fuels. Phasing out this research over the next three years would save \$2.5 billion by 2002.
- ☞ **Eliminate Energy Conservation, Solar and Renewable Research.** Phasing out these Department of Energy research efforts over the next three years would save \$3 billion by 2002.
- ☞ **Eliminate Future Funding for Clean Coal Technologies.** This effort, begun in 1984, partially funded research projects using coal in environmentally sound ways. Ending this effort would save \$100 million over six years.

- ☞ **Eliminate All Energy Conservation Grants to States.** This proposal would end the Low-Income Weatherization Assistance Program and the State Energy Program and save \$753 million by 2002.

- ☞ **Sell Part of the Strategic Petroleum Reserve.** This budget-cutting option proposes selling two of the four facilities that store up to 680 million barrels of oil for use by the federal government in the case of oil supply disruptions. This option would save an estimated \$3 billion by 2002.

- ☞ **Eliminate Telephone and Electric Credit Subsidies to Rural Electric Systems.** Under the Rural Utilities Service — successor to the Rural Electrification Administration — low-interest loans are available to rural electric and telephone systems. Eliminating these subsidies or having the rural systems use private credit sources would save \$396 million over six years.

- ☞ **Build an Interim Nuclear Waster Storage Facility and Slow Construction of a Permanent Storage Facility.** This proposal calls for opening a temporary storage facility for spent nuclear fuel near Yucca Mountain, Nevada by 2000. Costs related to planning and construction of a permanent facility would be reduced by 75 percent. This budget reduction option would save \$319 million by 2002.

- ☞ **Eliminate the Low-Income Home Energy Assistance Program.** This program pays some home energy costs —mostly heating bills in Nebraska and provides free weatherization of some homes. If the program were eliminated nationwide, the savings would total \$6.7 billion by 2002.

- ☞ **Charge Higher Electric Rates for Federal Hydropower.** This proposal is somewhat different from the sale of the systems considered by the 1996 Congress. Under this option, power marketing agencies such as Western Area Power Administration, which supplies up to 15 percent of the electricity in Nebraska, would be required to sell their power to the highest bidder.

Currently, most, if not all, electricity produced goes to rural electrics, municipal and regional public power systems such as Lincoln Electric System, Omaha Public Power District and Nebraska Public Power District. The proposal suggests that electric rates could rise from five to 50 percent, based on local situations and rates.

The Congressional Budget agency projects that adopting this option would save \$1.75 billion by 2002.

The Congressional Budget Office annually produces this fiscal “crystal ball” report outlining budgetary options. The 17th annual report, *Reducing the Deficit: Spending and Revenue Options*, is available on loan from the **State Library Commission at 401-471-2045.** ☺

Answers to Test Your Energy Knowledge (page 6)

1. **Aluminum.** The entire process to recycle an aluminium can, from collection, to melting, to processing a new one, takes only three months. Each minute, 113,204 cans are being recycled in the U.S.
2. **True.** By recycling steel for one year, enough energy could be saved to light the city of Los Angeles for eight years.
3. **Atlanta, Georgia.** The system mounted on the roof of the building that housed the 1996 Summer Olympics swimming facility generates enough electricity to power a community of 175 houses.
4. **China.** The U.S. is the world's third largest coal producer behind China and Russia.
5. **North Dakota** has the potential to produce more than 17 times its current electrical wind power generation.
6. **Transportation.** While vehicle fuel efficiency is expected to continue to improve, overall growth in the automotive market and a demand for recreational and all-terrain vehicles, in particular, will increase U.S. fuel consumption.
7. **1889.** Benjamin Harrison was President when the White House got its first electric lights.
8. **Paper.** In 1994, Americans recycled just over 40 percent of all used paper. Paper also has been recycled for the longest time — since 1690, when paper was first made from rags.

Cheaper, Better, Cleaner...

Doing the Right Thing Can Pay Dividends

Dan Overton, owner of Sun-Kist Dry Cleaners in Lincoln, is fairly typical of most small business owners in Nebraska. He is constantly on the lookout for ways to cut operating expenses so that he doesn't have to raise prices.

But Overton also had a problem. Because his dry cleaning equipment was more than 30 years old, it emitted excessive amounts of toxic pollutants into the air — a hazard both to employees and himself.

From the local Health Department, Dan heard about a new federal effort called Climate Wise that could help him with his problem. Climate Wise is a voluntary federal-state effort for manufacturers to use energy efficiently and minimize waste and environmental impacts.

Help Nearby

Overton also learned that the state's Energy Office was the Climate Wise resource in Nebraska.

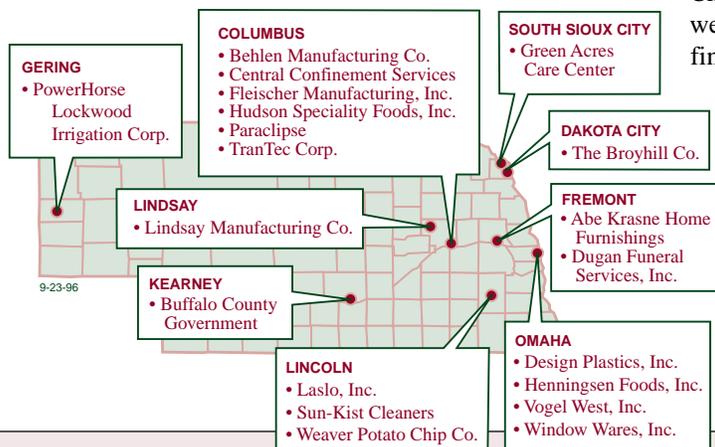
Overton's wants were simple — reduce hazardous emissions and energy waste without spending a lot of money. Rick Yoder

from the Lincoln-Lancaster County Health Department and Lynn Chamberlin from the Energy Office went through the business with a fine-tooth comb, seeking the best solutions for Overton's needs. Their report had three recommendations:

- Replace the dry cleaning equipment with a state-of-the-art system.
- Switch to brighter, more efficient fluorescent lights and ballasts.

Continued on page 4

Climate Wise Partners in Nebraska



Even Before Climate Wise...

Columbus' Behlen Manufacturing Company, one of Nebraska's larger manufacturers, began reducing pollution in their operations more than four years ago — before federal Climate Wise efforts began.

But even Behlen's managers saw advantages to becoming Climate Wise partners. "Our company is committed to environmental improvements and we felt this partnership would help us continue our pursuit of pollution reduction activities," said Mark A. Hillstrom, P.E., Engineering Manager of Environmental & Facilities.

As disposal costs grow, firms such as Behlen found that using fewer toxics and solvents solved two problems: buying less reduced manufacturing costs as well as disposal costs.

Four Years of Savings

In mid-1992, a solvent distillation unit was installed to reclaim solvent and reduce the amount of hazardous waste requiring disposal. Prior to the installation, Behlen sent 90 drums of solvent out-of-state for disposal. The year after installation, only 33 drums of solvent required disposal — a two-thirds reduction. Behlen estimates the cost of the new unit was recovered in 2.5 years.

Later in 1992, the firm installed a sulfuric acid recovery system that completely eliminated disposal costs. In 1991, 51,070 gallons of sulfuric acid were disposed of by Behlen. With the new recovery system, the waste sulfuric acid is reduced to crystals and then sold for reuse by others. The cost of the new process was recovered in about 2.5 years.



In 1994, a filter press was installed as part of an on-going process to upgrade waste water systems. The filter successfully reduced sludge generation by 50 percent. Behlen estimates the cost of the press was recovered in less than one year because of reduced disposal costs.

In 1995, A high solids painting system replaced a system using low solids paint. High solid paints are thicker and use less solvent than low solids paint. As a result of the systems change, not only is a reduced-solvent paint being used, but volatile organic compounds such as 1,2,4 trimethyl benzene, xylene, and methanol that result from spray painting will be dramatically reduced. Behlen estimates the cost of the new equipment will be recovered in about two years.

One of the First

Behlen became one of the state's first Climate Wise partners, in part, because of the opportunity to have engineering experts analyze their manufacturing systems at no cost to the business. In early 1996, staff from the Industrial Assessment Center at Colorado State University evaluated Behlen's operations and building, searching for opportunities.

Even though Behlen had already made a number of improvements, the industrial assessors found eight more ways the operation could save, either through reduced energy use or elimination of pollutants. The potential annual savings totaled nearly \$24,000. The cost of the recommended improvements could be recovered in less than two years.

Behlen's, after reviewing the Climate Wise findings, decided to make most of the improvements with the intention of completing all of them by late 1997.

- Insulate steam pipes and the condensate tank and replace steam traps.

Replacing the system would result in at least a 60 percent reduction in hazardous emissions from the dry cleaning machine and nearly eliminate airborne emissions from the reclaimer dryer. With the new system, only four 55 gallon barrels of hazardous solvent would be sent out of state for processing instead of nine barrels.

Also, since the new equipment combined washing and drying functions in a single unit, employees would no longer come into contact with the solvents.

"Last year I went through 912 gallons of solvent," said Dan Overton. "In the three months I have had the new equipment, I have only used 35 gallons. That's an 85% reduction. It feels great when the solvent guy comes by and I just wave at him 'cause I don't need any."

Low, Interest Rates

What finally convinced Overton to become a local Climate Wise partner was money. By making the improvements, he

"With Climate Wise, Nebraska is offering the state's industries and manufacturers an opportunity to improve their operations and reduce costs, making them more competitive in the world economy."

Lt. Governor
Kim Robak
September 26, 1995

would save more than \$4,500 a year. The Energy Office and a local bank agreed to finance the purchase of his new equipment, which is expected to pay for itself in less than seven years.

In 1996, the Energy Office received a \$250,000 Waste Reduction and Recycling Incentive grant from the Department of Environmental Quality. This grant was matched by lenders offering Dollar and Energy Saving Loans. The funds are then loaned at 6 percent interest to businesses such as Sun-Kist. Generally, the interest rate on the loan is considerably below current market rates.

To find out more about the state's Climate Wise efforts, contact **John Osterman** in the Energy Office. ☺

Dollar and Energy Saving Loans Win National Award

In December, the U.S. Department of Energy selected Nebraska's Dollar and Energy Saving Loans as one of only three 1996 State Energy Program Award winners.

"The purpose of these awards is to identify individuals and their organizations who consistently demonstrate program commitment and, through their initiative, make a significant impact," said Mary Fowler of the Department of Energy.

In presenting the award, Fowler cited the more than 11,700 energy efficiency improvement projects worth \$73 million made across the state.

The Energy Office, along with more than 300 lenders, has offered the low-interest loans to Nebraskans since 1990.



1,000 + Wells in the State...

Marginal Oil and Natural Gas Wells Generate \$47 Million in Nebraska

Nebraska's 1995 oil and natural gas production from stripper wells totaled \$28.8 million and nearly \$1 million, respectively according to an industry report. Nebraska stripper well production also accounted for 280 jobs and an additional \$17.4 million in economic activity.

Stripper wells are those that produce a marginal amount of oil or natural gas, generally 10 barrels or less a day.

According to the Interstate Oil and Gas Commission Compact which issued the report, the average Nebraska stripper well produced 4.67 barrels of oil in 1995, twice the national average of 2.10 barrels. In 1995, Nebraska had 1,114 oil stripper wells and 25 gas stripper wells.

The state's Energy Director, Bob Harris, said Nebraska ranked fifth among the states with the fewest number of closed marginal oil wells in 1995. "Nebraskans have a long tradition of conserving our natural resources," Harris said. "I'm glad to see that tradition is continuing." According to Harris, more than half of the oil produced in the state in 1995 came from marginal wells.

Marginal is Massive

Nationally, stripper wells accounted for just under 14 percent of the domestic oil and nearly five percent of natural gas. Accord-

ing to the report, marginal wells account for more than \$10 billion in U.S. economic activity and more than 60,000 jobs.

Small Output, Big Impact

The United States is the only country that has significant marginal petroleum production. Marginal wells help conserve the nation's energy reserves by ensuring as much as possible of the resource is recovered. Once a well is plugged, access to remaining reserves is often lost, since re-drilling a well is not cost-effective. Marginal wells produce ten barrels of oil per day or less or sixty thousand cubic feet of gas per day or less.

The Commission found each dollar of marginal oil and gas production creates 58 cents in additional economic activity and every \$1 million in production creates more than nine jobs.

In the last four years, nearly 75,000 stripper wells have been plugged and abandoned. These wells represented the loss of \$1.6 billion in economic activity and nearly 10,000 jobs.

The report, *Marginal Oil and Gas: Fuel for Economic Growth*, may be ordered from the Commission at 405-525-3556, extension 101. The Commission represents the governors of oil and gas producing states. Nebraska's Governor Nelson was chairman of the Commission in 1996. ☺

Omaha Station Opened in June...

First 85 Percent Ethanol Pump Opens in Lincoln

In late October, Governor Ben Nelson opened the state's second public 85 percent ethanol fuel pump in Lincoln. The Gas N' Shop at 1545 Cornhusker became the 21st public station in the nation to offer 85 percent ethanol fuel. The other public pump in Nebraska opened in June in Omaha.

"This is truly a great day for ethanol," Governor Nelson said. "Eighty-five percent ethanol vehicles are becoming more and more common as fleet operators become familiar with the vehicles' benefits." The Governor noted that state government has been operating 85 percent ethanol vehicles for four years. "With the latest group of vehicles purchased by the state, there are now about 100 in service."

A Home-Grown Fuel

Eighty-five percent ethanol is also known as E85. The fuel contains 85 percent ethanol and 15 percent unleaded gasoline. Only vehicles that have been designed to operate on the fuel can use E85. However, E85 vehicles can also operate on blended fuel with as little as 10 percent ethanol.

Noted and Quoted

Why are fossil fuels called "nonrenewable?" Which of the elements that created these fuels a long time ago are no longer acting today to create still more of them?

Fossil fuels are still being formed (although at a steadily decreasing rate). The problem is that we're depleting them 100,000 times faster than they're being created. Unless consumption changes dramatically, the world's population will run out of fossil fuels in a matter of centuries. That's why renewable sources of energy (such as solar power and wind power) and technological innovations (such as more efficient automobiles and heat-trapping homes) are becoming imperative.

"Ask Marilyn"
by Marilyn vos Savant
Parade Magazine, August 25, 1996

"Nebraska has been a leader in promoting ethanol as a home-grown, renewable energy source," John McKenzie, a Harvard corn farmer and state Corn Board member, said. "This public E85 fueling station and E85 vehicles will help create new markets for Nebraska corn and reduce our country's dependence on imported oil."



Governor Nelson (second from left) looks on as Corn Grower President Ron Ochsner fuels an E85 Ford Taurus at the new 85 percent ethanol pump in Lincoln.

More to Come

Nelson said that additional sites along or adjacent to the Interstate in central and western Nebraska are being considered. State government currently operates four private E85 pumps, two in Lincoln, one in Grand Island and one in Omaha. According to the Nebraska Energy Office, the primary users of the new E85 pumps will be federal and state vehicles as well as those operating E85 cars in private fleets or personal cars. Nearly 100 new E85 vehicles have just been assigned to federal employees in Omaha and Lincoln.

The E85 fueling pump installation project, of which Lincoln is one of the sites, is being spearheaded by the National Ethanol Vehicle Coalition, a partnership of the 21-state Governors' Ethanol Coalition and the National Corn Growers. Others assisting with the Nebraska effort include the Nebraska Corn Growers, Nebraska Ethanol Board, Nebraska Corn Board, and Nebraska Energy Office.

Ron Ochsner, President of the Nebraska Corn Growers Association, said, "Ethanol production now leads all other industrial uses as the most significant value added market for farmers in Nebraska." According to the state's Ethanol Board, 181 million bushels of corn were used at ethanol processing plants in 1995, resulting in 275 million gallons of ethanol. ©

Test Your Energy Knowledge

1. What waste product is easiest to recycle?
 - a. Aluminum
 - b. Glass
 - c. Paper
2. By recycling steel for one year, enough energy is saved to light the entire city of Los Angeles for eight years.
 - a. True
 - b. False
3. In what city do you find the largest building-mounted photovoltaic system today? Photovoltaic technology converts the sun's energy into electricity.
 - a. Atlanta, Georgia
 - b. Bakersfield, California
 - c. Miami, Florida
 - d. Phoenix, Arizona
4. What country produces the most coal?
 - a. China
 - b. Russia
 - c. United States



5. Which state is sometimes referred to as the "Saudi Arabia of Wind Energy?"
 - a. California
 - b. Nevada
 - c. North Dakota



6. By the year 2010, energy consumption will increase the most in which sector?
 - a. Commercial/Residential
 - b. Industrial
 - c. Transportation

7. What year was the White House first wired for electric lights?
 - a. 1879
 - b. 1889
 - c. 1899

8. What waste product is recycled most?
 - a. Aluminum
 - b. Glass
 - c. Paper



Answers on page 2

The Energy Office has an e-mail address!
energy@mail.state.ne.us

Information Services and Resources



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 address:
ENERGYINFO@delphi.com
 Modem access at **1-800-273-2955**

The **Energy Efficiency and Renewable Energy Network** or EREN is a world wide web site on Internet and a gateway to energy efficiency and renewable energy information sources.

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

"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.

This material was prepared with the support of the U.S. Department of Energy (DOE) Grant No. DE-FG47-92CE60410. However, any opinions, findings, conclusions, or recommendations expressed herein are those of the author and do not necessarily reflect the views of DOE.

Printed on recycled paper.



Nebraska Energy Office
 Box 95085
 1200 N Street, Suite 110
 Lincoln, NE 68509-5085
 Phone 402-471-2867

Free Copies 1996-1997 Recycling Directory

The 1996-1997 Nebraska Recycling Directory is now available from the Nebraska Department of Environmental Quality or the Nebraska Energy Office.

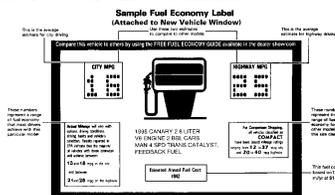
The directory provides information on a wide variety of technical, educational and financial resources available to assist recycling interests in the state.

The new directory identifies collection sites across Nebraska which accept recycled items, including hard to dispose of products such as scrap tires, waste oil and agricultural pesticide containers. It also offers disposal methods for many household hazardous waste products such as used paint, antifreeze and unused lawn and garden pesticides. In addition, the directory features regional and waste reduction activities and Nebraska businesses that offer products made from recycled materials.

For free copies of the directory, contact the **Department of Environmental Quality**, Integrated Waste Management Section, P.O. Box 98922, Lincoln, NE 68509-8922 or call 402-471-4210.

1997 Fuel Economy Guide

Free copies of the U.S. Department of Energy's *Fuel Economy Guide for Model Year 1997* are now available.



The Guide can be used as an aid to consumers considering the purchase of a new vehicle. The estimates of miles per gallon listed for each new vehicle are from the U.S. Environmental Protection Agency.

To secure a free copy, contact **Jerry Loos** in the Energy Office.