## Energy official presents options to dark future

## By Barb Richardson

t's been predicted that by the year 2010 "all present known sources of fuel will be gone," according to the Deputy Director of the Nebraska Energy Office.

Buck Balok said petroleum will still be a major energy source in the future, but probably will be used solely for transportation.

It's not that we're going to run out of oil, it's the type of oil used will change, Balok said. Because we will need to change our source of energy. We will need more technology and money, he said.

"Because of the increase in the use of technology, the cost of fuel will be higher," Balok said. He said he foresees gasoline costing between \$2 and \$3 a gallon.

Cost will determine whether the United States continues to rely on other countries until the sources are exhausted, he said.

"If it's cheaper to import oil rather than use advanced technology, than that's the route the U.S. will take," he said.

Balok said he expects solar, wind and nuclear powers and electricity to be important because there will not be enough petroleum products.

"RESEARCH IS going to improve nuclear energy," Balok said. "And I hope that it will not be abandoned as a source because of the anti-nuclear activity."

Balok said it takes 12 to 15 years to build a nuclear power plant. Currently there aren't any plans for plants, which makes developing the power source difficult.

Environmentalists still will be significant in energy policy, but will have to make compromises or prepare to go back to the 1750s or 1800s, he said.

Tar sands may be the petroleum product answer for the future, Balok said.

Technology is currently not available to extract the thick crude petroleum which exists sometimes 12,000 feet below the earth's surface, according to Balok. He added that he thinks technology will advance so the petroleum can be removed.

"It's estimated that in Alberta, Canada there are one trillion barrels of petroleum in the tar sands," he said.

"Above all, conservation is the best bet for the next 10 to 15 years," Balok said. "People are conserving now to the point that their pocketbooks demand.

Agricultural Economics Professor Loyd Fischer agrees that food will be more expensive because of energy costs.

Fischer said the scarcity of fuel and other resources will cause major changes in food production in the United States.

"Our agricultural system has adapted to cheap and available resources. We rely heavily on machines and chemicals for the production process. And the problem with that is that it makes us vulnerable to scarcity of those materials," Fischer said.

Fischer said the United States has the capability to feed it's people, providing changes are made.

PEOPLE MUST give up agricultural luxury items, such as steak and alcohol, he said. The adjustment to no luxury items probably will come gradually as people realize they can afford soybeans for protein but not steak, Fischer said.

When people begin to give up luxury foods they probably will notice how much they spend on food, Fischer said.

"Long before we'd go hungry, we would spend at least 50 percent of our money on food."

Diet adjustments already are taking place today. For example, Fischer said many people are beginning to eat poultry or lesser cuts of beef.

Another needed adjustment is a switch from machineand chemical-dependent agriculture to a labor-intense production process similar to mainland China's agricultural program, he said.

The future scarcity and cost of resources will force the agricultural process to move to a labor-intense process, according to Fischer.

"Mainland China has about four times our population and about 60 percent of our land base but is selfsufficient," Fischer said.

HE ADDED that the Chinese have proved that it is possible to farm without chemicals, machinery or an abundance of resources.

Labor-intense farming would not only help produce food, but would help unemployment in the future, Fischer said.

Fischer said some farmers already have switched from machines and chemicals. The method is called organic farming.

not strong enough to institute a strong birth control program, Fischer said.

Some countries such as the United States, actually subsidize having children through taxes and insurance programs, Fischer said. He said these programs must be changed to stabilize the population growth rate.

He said some countries equate power with population, and some religious beliefs support population growth, both of which hinder stabilization.

THE LESSER developed countries must gain independence to feed their population. Food aid programs are not a way to feed people of other countries, according to Fischer.

He said that food aid only depresses the recipients because food becomes so cheap that incentive for native farmers to sell their food on the market is squelched.

Although Fischer does not fully support food aid, he said the United States probably will keep responding to natural disasters in other countries with food aid.

"In the future we will still have the capability to give aid without denying ourselves food," Fischer said.

Fischer said he thinks that a large part of the United States' economy will focus on feeding U.S. residents.

Wallace Peterson, UNL economics professor, said the United States' economy will also depend on the energy situation.

Three things may happen to the economy in the future, according to Peterson. He said the economy may "muddle along" with high oil prices and inflation, a worldwide depression could result if a major oil cutoff takes place or new technology may save the resources and help the economy.

"THE MOST likely result is that we will keep muddling along with too much inflation and unemployment," Peterson said.

Energy will dictate how much of a person's income will be spent on food, shelter, transportation and medical care, he said.

Unemployment may not be a long-range problem, according to Peterson. He said the unemployment rate will peak soon because of the post-war baby boom. But after the peak there may be a surplus of jobs.

He added that women and young people will continue to pour into the job market causing unemployment problems into the 1980s. Peterson said the United States should decrease dependence on foreign oil by letting the price of oil go up. A more direct way to curtail oil use would be a direct tax on oil, he added.

BALOK SAID he feels high fuel prices are good because they force people to conserve energy. The costs of technology and scarcity will raise prices, especially food prices because the high-priced fuel is essential to food production, he said.

The population of the United States, the Soviet Union, China, Western Europe and Japan have stabilized, making it easier to feed those populations, Fischer said. The lesser developed countries have problems feeding their people and are further plagued by the highest population growth rates, he said.

The governments of the lesser developed countries are

Peterson said that a third possibility is rationing, making sure everyone gets their share of oil products.

## Students of 1984 pop capsulized crib notes

## By Mike Sweeney

lysses Nicholas Listener looked out the window of the big, gray bus as it rolled west along Holdrege street toward city campus.

He had given up driving his car to school after the price of gasoline soared higher than the price of tuition. Besides, it was harder than ever to find space after all parking lots had been absorbed by the Ministry of Truth.

The Ministry of Truth. He could see it out of the left-hand window, a big, black and white building facing the desolation of east campus. He tried to remember. Once, long ago, it had been called by a different name. But he couldn't recall the time before the Ministry of Truth, or the time before the words "All Campuses are Equal" had been carved above the stone entry. Listener looked at his watch; 9:30 a.m.,

April 4, 1984.

It looked like he would be late to class for the fifth time this semester. He didn't mind so much walking into class late. It was always easy to sneak into the sports complex basketball arena for his political science lecture, but he hated missing the first few minutes of Profspeak.

LISTENER HOPED he rememberd everything on the learning pills he took

that morning. The pills-small, brightly colored, sweet-tasting things-contained complete lessons. Students swallowed them instead of reading textbooks and discussed their pill knowledge at daily Profspeaks.

The four pills Listener took that morning made him feel dehydrated. Four pills for four classes. He took Gowdyspeak and Costellspeak pills for his sports history class. They were easier to swallow now that 97 percent of the irritating ingredients had been removed.

For his public relations class he took a Regentspeak pill from a small blue bottle. Overdoses cause permanent brain damange, the warning label said.

He took a Speakspeak pill for his extemporaneous speech class. The pill contained Kennedy monologues from the early 1960s.

And he took a Nixonspeak pill for his political science class. He discovered the pill was hard to swallow, but tasted better when taken with a small quantity of sodium chloride from the student pill dispensary.

Listener also took supplementary learning pills from the Ministry of Love Library.

Sometimes the learning pills left a bitter taste in Listener's mouth, so he didn't always take them. Sometimes he had to force himself to cram for a test.

**Continued on Page 7**