

IOWA energy BULLETIN

Department of Natural Resources
Vol. 24, Num. 4, 4th Quarter 1998

The First-Ever Iowa Energy Summit A Student Vision for Iowa's Energy Future



◆ Iowa high school students prepare energy policy resolutions for debate.

Several Iowa high schools debated the importance of energy in the first-ever Iowa Energy Summit Oct. 30. The one-day conference taught students how energy policy affects Iowa's economy and environment.

The conference, sponsored by the DNR and the Center for Energy and Environmental Education (CEEE), was held at the University of Northern Iowa (UNI). Students discussed energy programs, economic and political issues surrounding energy, and its role in everyday life.

Rick Stinchfield, coordinator of outreach activities for CEEE, said several companies across Iowa sup-

ported the Energy Summit.

"We have had so much interest from the business community and Iowa high schools that plans are underway to make this an annual event," said Stinchfield. "Every high school in the state is invited to participate, and as more schools hear about it, we hope to see the numbers grow."

Schools Prepare Energy Resolutions

In preparation for the event, students submitted a total of 27 resolutions detailing their views and visions for Iowa on energy issues in

the following areas:

◆ **Transportation** — alternative-fuel vehicles, alternative modes, public transportation

◆ **Agriculture** — ethanol, biomass or switchgrass, methane capture, nitrogen application

◆ **Energy production** — biomass, wind, solar, hydro, biogas

◆ **Residential** — energy efficiency, heating/cooling systems, insulation

The conference included small committee meetings in the morning,

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Message from Sharon Tahtinen

Farmer-Grown. Farmer-Owned. Ethanol Tax Exemption Does Its Job



1998 opened with the extension of the state — and later federal — ethanol tax exemption, and closed with the dedication of Iowa's first farmer-owned ethanol plant.

Here's to one law that's doing its job.

Dozens of state and national organizations have pulled together during the last 18 months to push for governmental support of the ethanol industry. Doing so expands markets for Iowa's agricultural products, which translates into new business for independent farmers.

Some call it "value-added agriculture." We call it smart business.

All of this hard work is coming to fruition in Blairstown, Iowa. Sunrise Energy Cooperative is building Iowa's fourth ethanol plant, and the state's first farmer-owned one. Three-hundred farmers will

profit from the five to eight million gallons of ethanol produced there each year.

Sunrise Energy is just one of several cooperatively owned ethanol plants sprouting up across the country as a result of the federal tax exemption. Of the eight ethanol plants scheduled to open in 1998 and 1999 in the United States, six are farmer-owned.

As more plants produce ethanol, more market areas can be penetrated, which will increase demand and mean a greater quantity of ethanol is exported from Iowa. This is evident as the domestic ethanol industry achieved all-time highs for production in October 1998, producing 103,000 barrels per day of the alternative fuel. Additionally, the Renewable Fuels Association predicts the ethanol industry will set a new overall record for production in 1998, with the greatest growth from small producers.

Most importantly, farmers reap the benefits.

"Farmer-grown. Farmer-owned." When it comes to legislative support of the ethanol industry, that's the whole point.

Sunrise Energy Cooperative is developing an integrated energy farm in Blairstown. The Department of Natural Resources helped the cooperative with a feasibility study for its new ethanol plant and farm. For complete details on how you can learn more about integrated energy farms, please see the article in this newsletter on page five.

Sincerely,

A handwritten signature in dark ink that reads "Sharon A. Tahtinen". The signature is fluid and cursive.

Sharon A. Tahtinen
Energy Bureau Chief

Power to Choose A Consumer's Guide to Electricity Deregulation

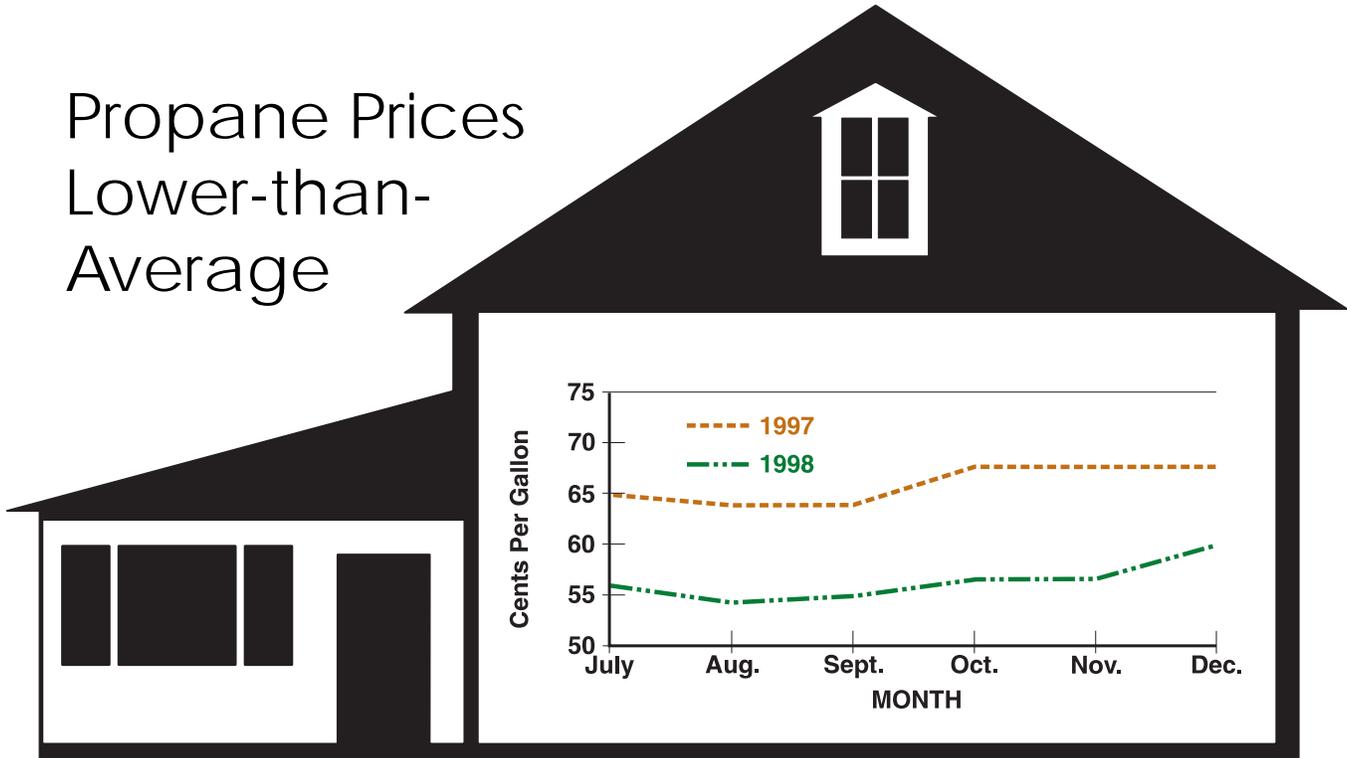
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This 24-page booklet, published by the Chicago Office of the Department of Energy, is an excellent resource for understanding the core issues surrounding restructuring of the electric utility industry in the Midwest. The guide includes a description of what restructuring means, how deregulation could affect individuals and small businesses, important terms, and more. It also provides key contacts from across the region. For your copy, contact Julie Tack, DNR information specialist, at (515) 281-8665; e-mail: jtack@max.state.ia.us



Staying Warm and Saving Money

Propane Prices Lower-than-Average



As Iowa consumers enjoy low prices at the gas pump this winter, they will also benefit from low propane prices. A recent DNR survey showed the average price of propane in Iowa is 57 cents per gallon, which is 15 percent lower than the price of propane in fourth quarter 1997. Crude oil prices and high inventories have led to these low levels.

Crude oil prices dipped below the \$11.00 per barrel mark for the first time in more than a decade, and natural gas is now trading below \$2.00 per million Btus. Because propane is derived from the refining of crude oil and natural gas, propane prices tend to follow the cost associated with these products.

The U.S. propane inventory is up 20 million barrels (37 percent) from last

year. Mild temperatures and reduced grain drying because of low corn moisture during this year's harvest have helped to weaken demand. Economic problems in Russia and Asia have also contributed to lower world demand for propane.

The propane market should see little change during the fourth quarter of 1998. Crude oil prices are forecasted to remain in the \$12.00 to \$14.00 per barrel range, and natural gas prices are expected to stay low because of record amounts of gas in storage. With Iowa's warm autumn and early winter, the state's propane demand is expected to fall below the average of the past five years. Propane inventories should remain adequate through spring of 1999 and perhaps well into the summer. Most analysts predict consumers

will see only small seasonal price increases of one to two cents over the remainder of the heating season.

Iowa Energy
Data is on the
Web

The DNR-Energy
Bureau Website :
www.state.ia.us/dnr/energy

Visit Today!

Students Debate Iowa's Energy Future

Energy Summit article, continued from page 1

where students debated the merits of each resolution. In the afternoon session, students gathered in a model-United Nations format, debating the 10



◆ *Students debate the merits of energy-efficiency and renewable-energy technologies and other energy topics.*

resolutions finalized in the morning session. Seven of the 10 resolutions

passed (see below).

Participating schools included: Burlington High School; Don Bosco High School, Gilbertville; Dowling High School, West Des Moines; Wahlert High School, Dubuque; Waverly-Shell Rock High School; and West Central High School, Maynard.

Iowa Businesses Support Summit

Several business helped make the Energy Summit successful. Pella Windows and MidAmerican Energy provided generous financial support. Robin Fortney, senior environmental coordinator for Mid-American Energy,

attended the event.

“This was an excellent opportunity for students to discuss energy issues and do that in a public forum,” said Fortney. “We were very pleased to be a sponsor.”

The following organizations served as advisors to students: Alliant Corporation; Burlington Northern Santa Fe Railway Co.; Cargill, Inc.; Ford Motor Company; Hy-Vee Foods; Iowa Department of Natural Resources; Iowa Department of Transportation; Iowa State University; Metro Waste Authority; Twin States Engineering and Chemical Company; MidAmerican Energy; Waste Management Inc.; and Wind Utility Consulting.

Plans are underway for the 1999 Energy Summit. For more information or to participate in future events, contact Dewayne Johnson, DNR, at (515) 281-7018 or e-mail: djohnso@max.state.is.us

Resolutions Approved at Iowa Energy Summit

1. Energy Audits — Calls for residential energy audits to be performed by utility companies. Audits would include checks for water heater insulation, showerhead flow and lighting efficiency.

2. Wind Power — Requests grants and tax incentives to support further research and development of wind power as a renewable energy source.

3. Hybrid Electric Vehicles — Recommends that Iowa move toward hybrid electric vehicles (HEVs) as the vehicle of choice in fleets and by the general public. To achieve this goal,

the Summit calls for state tax incentives and coordinated information campaigns, and urges marketing of HEVs in Iowa.

4. Increasing Ethanol Fuel Consumption — Encourages the purchase of ethanol fuels by consumers and calls for further development of studies on the environmental and economic benefits of ethanol.

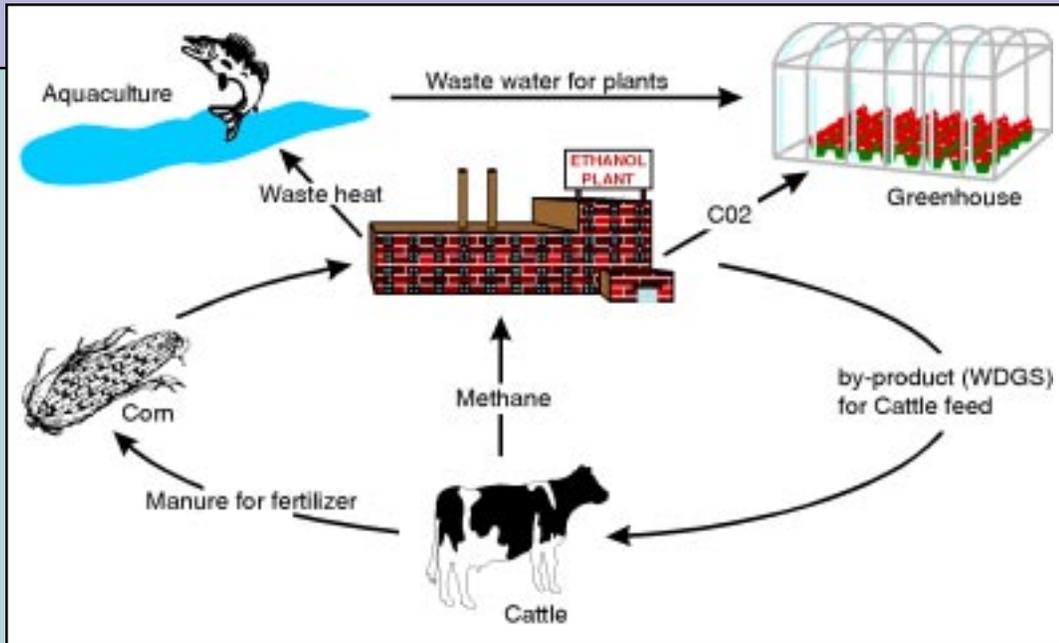
5. Biomass Energy Production — Sets the following goal: Within 25 years, 33 percent of Iowa's energy needs will be met through biomass energy production. Calls for a coal tax

to underwrite the cost of research for biomass energy production.

6. Commercial Energy Management — Calls for businesses to use “Energy Star Compliant” equipment in all new construction and upgrades of current facilities. Encourages businesses to support green utility programs and recommends incentives be offered to participants.

7. Alternative Transportation — Recommends the further development of alternative fuel or “gas-efficient” cars, high-velocity trains and magnetic-levitation trains.

New Computer Program Forecasts Energy Profits and Potential



part of their farm operation.

Ethanol is Center of System

The ethanol plant is the hub of the hypothetical system (see diagram at left). The farm produces ethanol, waste heat used for aquaculture, carbon dioxide for the greenhouse, and animal feed for cattle. Cattle manure is used to fertilize the corn

grown to supply the

ethanol plant. Methane from the manure is also used as a supplemental energy source at the ethanol plant, and wastewater from the aquaculture is used to water the plants in the greenhouse. Systems like the integrated energy farm can take economic advantage of waste materials by using them to create products with value.

How to Order

To receive a copy of the Integrated Energy Farm computer model, contact David Downing with the DNR at (515) 281-4876, or e-mail at ddownin@max.state.ia.us

For those interested in more detailed information regarding the model, a manual is available for \$20.00.

Farmers can now evaluate homegrown energy benefits through a computer model of a hypothetical energy-producing farm, available through the DNR. The program brings together farm activities that produce feedstocks for each other, especially energy production. Developed by the DNR and Sunrise Energy of Blainston, Iowa, the model includes an economic feasibility study and business plan.

Computer Model Provides Complete Data

The computer model allows a user to input a wide range of financial data regarding corn-to-ethanol production, cattle feedlot operation, methane digestion, and aquaculture

and greenhouse use. The various components of the energy farm may be examined as stand-alone operations, or as an integrated farm system. A user can also evaluate the economic potential of using different types of waste as feedstock. Spreadsheets can be generated on:

- ◆ facility data,
- ◆ capital requirements,
- ◆ production cost and sales,
- ◆ revenue-expense projections,
- ◆ cash-flow projections,
- ◆ depreciation,
- ◆ amortization,
- ◆ loan parameters, and
- ◆ balance sheets.

Information obtained from the model is designed to be transferable to those considering energy production as

Did You Know

One compact fluorescent lightbulb saves enough energy to displace 662 pounds of coal over its lifetime. This means 1,600 pounds of carbon dioxide and 18 pounds of sulfur dioxide are prevented from polluting the air.

Sen. Freeman Joins National Wind Coordinating Committee

State Sen. Mary Lou Freeman recently became a member of the National Wind Coordinating Committee (NWCC). She was appointed by the National Conference of State Legislatures because of Iowa's strong wind resources and demonstrated interest in wind.

Freeman represents Senate District 5 and is serving her first full term in the Iowa Senate, where she serves as an Assistant Majority Leader. She is chair of the Transportation, Infrastructure & Capitals Appropriations Subcommittee, and serves on several standing committees, including Natural Resources & Environment.

The NWCC identifies issues that affect wind power, establishes dialogue among key stakeholders, and supports the development of a commercial market for wind power. NWCC members include representatives from electric utilities, state legislatures, state utility commissions, consumer advocacy offices, wind equipment suppliers and developers, green power marketers, environmental organizations, and state and federal agencies.

DNR Student Leadership Awards

The DNR honored two students as part of the Annual Energy Leadership Awards luncheon Nov. 4 in Des Moines. The students were chosen from more than 40 energy-related entries at the Iowa State University Science and Technology Fair last spring.



◆ Gov. Terry Branstad presents middle school student Eric Turner (above) from Algona an award for his project on polymers. Joni Taylor (left) of Stuart won in the high school division for her project investigating cow manure as an energy source.

Iowa Energy Center Offering \$7,000 in Energy Scholarships

The Iowa Energy Center is awarding Youth and Energy Scholarships to high school students for exceptional energy-related projects. Scholarships will be awarded as part of the Iowa State University Science and Technology Fair in spring 1999.

Energy-related projects can fall under many of the science fair's listed categories. From engineering to physics, to botany and earth sciences, energy plays a role.

Sparking Iowa students' interest and exploration of energy issues is one of the important goals of the Iowa Energy Center. The Center created the Youth and Energy Scholarships as one

way to meet that goal.

The two award categories are "Energy Efficiency" and "Renewable Energy." Each category receives three scholarships, with first place earning \$2,000, second place \$1,000, and third place \$500. Scholarship funds will be provided directly to the college of the student's choice.

For more information about the Youth and Energy Scholarships and the state science fair, contact the Iowa Energy Center's website at <http://www.energy.iastate.edu/eduinfo/fair.html>, or contact Adriene Koett-Cronn at (515) 294-4391; e-mail: adriene@iastate.edu.



Training Tools for Building Officials

The DNR is sponsoring a series of **free** training sessions on the Iowa Building Energy Code in January and February, 1999. If you're a building official, don't miss this valuable opportunity! Training will be offered by national experts with Enermodal Engineering of Denver, Colorado.

1992 Model Energy Code and ASHRAE/IES 90.1-1989

Training sessions will provide a clearer understanding of the residential and commercial energy codes and how to enforce them.



| | |
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| January 28, 1999 | Storm Lake City Hall |
| January 29, 1999 | Waverly City Hall |
| February 25, 1999 | Iowa City City Hall |
| March 19, 1999 | West Des Moines Conference Center |

Compliance Tools: MECcheck and COMcheck-EZ

Training sessions will include hands-on training on the software tools used for demonstrating residential and commercial building energy code compliance.



| | |
|-------------------|--|
| January 15, 1999 | Ankeny, Energy Center Resource Station |
| February 11, 1999 | Ankeny, Energy Center Resource Station |
| February 26, 1999 | Ankeny, Energy Center Resource Station |

Home Energy Rating System Demonstrations for Building Officials

Iowa building officials are invited to attend field demonstrations of home energy ratings and discuss how a home that has been rated complies with Iowa's building energy code. Demonstrations will be held in March and April, 1999.

For more information, contact Craig Swartzbaugh with Iowa Building Code Consultants at (515) 276-7419, or Tami Foster with the DNR at (515) 281-7015.

Iowa Legislators Discuss Restructuring

A committee established by the Iowa legislature to study utility deregulation held its first meetings in October and November, 1998. The Deregulation and Restructuring of the Electric Utility Industry Committee will evaluate potential effects of utility restructuring on commercial and residential customers. Committee members will also review the legislative actions of other states and develop recommendations for Iowa.

Committee members include Sen. John Jensen (co-chair), Rep. Chris Rants (co-chair), Sen. Patrick Deluhery, Sen. Michael Gronstal, Sen. Nel Schuerer, Rep. Clyde Bradley, Rep. William Brand, Rep. Kay Chapman and Rep. Janet Metcalf.

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Calendar of Events

January 15, February 11 and February 26, 1999. Energy Resource Station, Ankeny, Iowa. DNR-sponsored training on residential and commercial building energy compliance software. Contact Craig Swartzbaugh with Iowa Building Code Consultants at (515) 276-7419, or Tami Foster with the DNR at (515) 281-7015.

January 28, January 29, February 25 and March 19, 1999. Four sites across Iowa. DNR-sponsored training on the 1992 Model Energy Code. Contact Craig Swartzbaugh with Iowa Building Code Consultants at (515) 276-7419, or Tami Foster with the DNR at (515) 281-7015.

February 4-5, 1999. Des Moines, IA. *Momentum is Building* Conference, sponsored by Iowa's Electric Cooperatives and the Iowa Energy Center. Building professionals will learn technical information on energy efficiency. Contact Conference Coordinator Jessica Lamker at (319) 366-4512, ext. 358.

February 22-24, 1999. Las Vegas, NV. *Ethanol: Into the New Millenium*, presented by the Renewable Fuels Association in conjunction with the National Petroleum Marketers Association. Contact Bryan & Bryan at (719) 942-4353.

March and April 1999. Several sites across Iowa. Demonstrations of the Home Energy Rating System. Contact Craig Swartzbaugh with Iowa Building Code Consultants at (515) 276-7419, or Tami Foster with the DNR at (515) 281-7015.

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