

FINAL REPORT

**ALTERNATIVE ENERGY PRODUCTION
STUDY COMMITTEE**

Presented to the Legislative Council
and the Iowa General Assembly
February 1996

Prepared by the Legislative Service Bureau



Legislative
Service
Bureau

FINAL REPORT

Alternative Energy Production Study Committee

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MEMBERS

Senator Bill Fink, Chairperson
Senator Brad Banks
Senator Dick Dearden
Senator Steve Hansen
Senator Mary Lundby

Representative Ron Nutt, Chairperson
Representative Jack Drake
Representative Jack Holveck
Representative David Lord
Representative Linda Nelson

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AUTHORIZATION AND APPOINTMENT

The Alternative Energy Production Study Committee was established by the Legislative Council for the 1995 Legislative Interim. The charge of the Committee was to review issues relating to alternative energy production, including subsidization of purchases by regulated utilities, wind energy, and other incentives to increase utilization of alternate energy production.



Alternative Energy Production Study Committee

1. Background.

Chapter 476 of the Iowa Code requires that rate-regulated electric utilities purchase a percentage share of a total of 105 megawatts of alternate energy. The Utilities Board was required to set the rate for purchase which is 6.02 cents per kilowatt hour.

2. Committee Proceedings.

The Committee elected Senator Bill Fink and Representative Ronald Nutt as Co-chairpersons. The Committee was initially authorized two meeting days which were held on November 6 and 7. Upon completion of the meeting on November 7th, the Committee voted to request an additional meeting date and the request was approved by the Legislative Council. This third meeting was held on January 16, 1996. The remainder of this report summarizes the proceedings of the three meetings and the recommendations which the Committee adopted.

3. November 6, 1995.

Federal Overview. Dr. Larry Hill, Oak Ridge National Laboratory, Tennessee, and Visiting Fellow with the National Conference of State Legislatures, discussed regulations at the federal level affecting electric utilities and the restructuring of the electric utility industry. He identified the following four policy issues that Iowa and other states will need to address now or in the future: retail competition; economic regulation; strandable commitments; and efficiency, renewables, and the environment. Dr. Hill explained that strandable commitments are investments that a utility has made in the past that have outlived their usefulness as a nuclear power plant. Mr. Matthew Brown, Senior Energy Policy Specialist, National Conference of State Legislatures, presented a 50-state survey entitled "Incentives for Renewable Energy Sources that Generate Electricity."

State Overview. Mr. Larry Bean, Division Administrator, Energy and Geological Resources Division, Department of Natural Resources, discussed the state's current energy plan, the state's current energy policies, and the importance of alternative energy in energy diversification. Mr. Bill Smith, Bureau Chief, Rate and Safety Evaluation Bureau, Utilities Division, Department of Commerce, provided background on Iowa's current alternate energy production requirements. The Chairperson of the Iowa Utilities Board, Mr. Alan Thoms, and members of the Board, Ms. Nancy Shimanek Boyd and Mr. Emmet George, discussed a proposal which would eliminate the 105-kilowatt purchase requirement and replace it with a requirement that an investor-owned electric utility must derive a minimum of two percent of their annual load from renewable energy sources.

West Branch Middle School Science Class. Partners in Environmental Science, a West Branch Middle School science class, asked the Committee to maintain energy efficiency standards and alternate energy purchasing requirements. The class

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discussed various ways in which they had implemented energy efficiency strategies and reduced energy requirements in their school and at home.

Investor-Owned Electric Utilities. A panel composed of Mr. John Lewis, President, Iowa Utilities Association, Mr. Dean Crist, Manager, Bulk Power Services, MidAmerican Energy Company, Mr. Erik Madsen, Manager of Pricing and Contracts, IES Utilities, Inc., and Mr. Lynn Vorbrich, President, Electric Division, MidAmerican Energy Company, discussed the current alternate energy purchasing requirements, the practical use of alternate energy, changes in the electric utility industry that will affect the utilities' ability to compete, and advocated the repeal of the alternative energy purchasing requirements.

Rural Electric Cooperatives (RECs). Mr. Keith Luchtel spoke on behalf of the Iowa Association of Electric Cooperatives. He discussed the activities of the state's rural electric cooperatives and stated that while the RECs support the development of alternate energy, they do not believe that it is fair to ask only the investor-owned utility customers to finance the development. Ms. Dawn Vance, Government Relations Director for the Iowa Association of Electric Cooperatives, was in attendance to answer questions.

Municipal Utilities. Ms. Linda Kading, General Counsel for the Iowa Association of Municipal Utilities (IAMU), presented IAMU's view that there is a need for Iowa to develop renewable resource alternatives, but stated that they are neutral on the issue of repealing the 105-kilowatt purchasing requirement. Mr. Glenn Cannon, General Manager, Waverly Light and Power, discussed the positive experiences that Waverly Light and Power has had with wind-generated electricity and provided a copy of a final report entitled "Demonstration of Wind Turbine Operation for Utility Electricity Production in Midwest Wind Regimes."

Business and Industry. Mr. George Van Damme, Energy Manager, Deere & Company, provided a history of John Deere's development in the state and explained actions that the company has taken to implement energy efficiency strategies. He stated that he supports the concept of restructuring and competition in the electric utility industry and added that imposing long-term embedded costs on Iowa utility companies and their customers does not bode well for the competitive position of those Iowa businesses. Mr. John Croushore, Chief Financial Officer, Cedar River Paper Co., Cedar Rapids, explained the company's reasons for locating within the state of Iowa in 1993, one of which was the competitive cost of energy because energy is the single largest non-fiber expense the company incurs. He stated that any increase in the costs of energy would severely affect the company and requested that the Committee ensure that the same sound economic design and planning be required from alternative energy production facilities as would be required of any competitive business to survive.

Sustainable Energy for Economic Development (SEED). This panel was composed of three members of the SEED organization: Mr. Mike Tennis, Senior Energy Analyst, Union of Concerned Scientists; Ms. Heather Rhoads, Iowa SEED Coordinator; and Mr. Ed Woolsey, Board Member, Iowa Renewable Energy



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Association. Mr. Tennis stressed that today's market costs reflect power purchases from existing power plants, which is excess capacity carried over from the past and that alternate energy prices reflect the costs to build and operate new plants. He compared rates between the current alternate energy flat price, which he believes fights inflation, and electricity rates, which will increase with inflation. Ms. Rhoads discussed the SEED campaign's goals, values, and platform and stated that the Iowa Legislature has a moral imperative to develop a sustainable energy vision to ensure the well-being of future generations. Mr. Woolsey discussed figures showing the small proportion of the 105-megawatt alternate energy share to that of current Iowa utility electric production, the immense economic potential for renewable energy in Iowa, and discussed federal incentives that exist for utility energy production.

Izaak Walton League. Ms. Nancy Lange, Associate Director, Midwest Energy Efficiency Program, Izaak Walton League, Minneapolis, Minnesota, urged the Committee to continue to require investments in renewable energy. She recommended that a timetable for acquisition be established, but that the rates should be left up to competitive forces among renewable providers to produce the most competitive price; that small producers should be encouraged; and that even if the structure of the electric utility industry is changed in the future, the state should require all retail electric suppliers to purchase a share (i.e. 5 percent) of its energy needs from renewable resources.

Former Legislator. Mr. David Osterberg, former member, House of Representatives, now Professor of Environmental Policy, University of Iowa, provided a personal history of the passage of the alternate energy purchasing requirements. He stated that the present alternative energy rates are fair when the proper comparison is made and that the utilities want to compare short-run costs to long-run costs when the proper comparison is long-run costs to long-run costs.

4. November 7, 1995.

Technologies and the Future. Dr. Frank Kreith, Legislative Fellow, American Society of Mechanical Engineers, discussed the status of renewable energy in the United States, the process for development of new technologies, and provided a comparison of the different types of alternate energy technologies.

Iowa Energy Center. Mr. Norm Olson, Program Manager, Iowa Energy Center, provided background on the Center and stated his concerns with the current alternate energy program as follows: Biomass is largely ignored in the current program, but has the potential to create five to six times as much local economic activity as wind energy systems; the current program is based on risky long-range assumptions (33 years); it does not provide all of the answers needed for Iowans to make optimized future decisions; most of the financial benefits will not go to Iowans; and there is no nonperformance penalty under the current contracts. He suggested that a basic resource assessment for each significant potential

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alternative energy source be performed and that biomass and wind demonstration projects should be undertaken.

Hydroelectric Power. The panel included the following persons: Mr. Loyal Gake, Director of Development and Regulatory Compliance, North American Hydro, Neshkoro, Wisconsin; Mr. Tom Wilkinson, President, FORIA Hydro Corp., Cedar Rapids; Mr. Jean-Pierre A. L. Honnart, Groupe Page, Geneva, Switzerland; Mr. Oliver Page, Groupe Page, Cannes, France; and Mr. Michel Page, Groupe Page, Cannes, France. Mr. Gake and Mr. Wilkinson discussed the technical aspects of developing hydroelectric power and stated that nearly five cents per kilowatt hour is needed in order to develop hydro electric power. Mr. Honnart recounted his efforts to develop hydroelectric power within the state and expressed his frustrations with changes that have been made and actions that have been taken by the investor-owned electric utilities.

Wind Energy. The panel included the following persons: Mr. Philip Stoffregen, Legal Counsel, Zond Systems; Mr. Steve Blake, President, Windustries, Inc.; Mr. Tyler McNeal, Windway Technologies; and Mr. Paul White, Midwest Manager, Vestas-American Wind Technology, Inc. Mr. Stoffregen made several comments regarding the proposal that was presented by the Iowa Utilities Board. Mr. Blake expressed his frustration regarding the investor-owned utilities' refusal to enter into contracts with Windustries. He stated that the Alternate Energy Production (AEP) law should not be changed and that in reliance upon the law, Windustries and other companies have invested substantial resources to develop AEP projects. Mr. Tyler McNeal distributed a copy of a petition signed by over 100 students from Northwest Junior High School in Iowa City asking the Committee not to recommend changing the AEP law. Mr. McNeal stressed that the AEP law is working and that changing it now will draw into question the tradition of Iowa as a fair place to conduct business. Mr. Paul White stated that Vestas, a wind turbine manufacturing company, wants to build a manufacturing plant in Iowa but is concerned that the AEP laws will change.

Methane Production from Solid Water Landfills. Members of the panel included the following persons: Ms. Teree Caldwell-Johnson, Director, Metro Waste Authority, Des Moines; Mr. Ron Mace, Landfill Facility Manager, Blue Stem Solid Waste Agency, Cedar Rapids; and Mr. Randy Hartman, Executive Director, Great River Solid Waste Management Agency, Fort Madison. Ms. Caldwell-Johnson provided the Committee with an overview of the Metro Waste Authority and its methane-producing facility and discussed landfill gas and its potential as a renewable resource. Mr. Hartman and Mr. Mace discussed projects at their respective landfills and urged the Committee to maintain the six cents per kilowatt buyback for gas-to-energy projects.

Biomass. Mr. Jim Cooper, Chariton Valley Resource Conservation and Development Area, explained that Chariton Valley Biofuels Project is to use conservation reserve program land to grow switchgrass to be used as a fuel source. He advocated the use of biomass as an economic and feasible energy alternative.



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5. January 16, 1996.

Committee Discussion and Recommendations. The Committee discussed proposals offered by Co-chairperson Nutt and Co-chairperson Fink, the Iowa Utilities Association, and the Iowa Utilities Board. A comparison of three of the proposals as prepared by the Iowa Utilities Association is attached. Co-chairperson Fink's proposal was similar to the SEED proposal. Co-chairperson Nutt's proposal required an investor-owned electric utility to purchase alternate energy at the avoided cost rate, which is the same as the federal regulations.

After limited discussion, the Committee adopted the following recommendation:

The AEP Committee hereby recommends that the House of Representatives and the Senate work in cooperation to pass a bill during the 1996 Legislative Session that recognizes the importance of alternative energy in this state as a clean source of power for today, as well as the future, and that this bill take into consideration the ever-changing nature of the business climate of the power industry today.

6. Written Materials on File with the Legislative Service Bureau.

- a. Procedural rules adopted by the Committee.
- b. November 6, 1995, Des Moines Register article.
- c. Fifty-State Survey and other informational materials submitted by Mr. Matthew Brown, National Conference of State Legislatures.
- d. Written Testimony and Alternate Energy Policy Questions submitted by Mr. Larry Bean, Department of Natural Resources
- e. Iowa Utilities Board alternate energy production proposal outline submitted by Mr. Bill Smith.
- f. Testimony outline and supporting documentation submitted by Mr. Glenn Cannon, Waverly Light and Power.
- g. Written testimony of Mr. Dean Crist, MidAmerican Energy Company.
- h. Testimony outline of Mr. Erik Madsen, IES Utilities, Inc.
- i. Written testimony of Mr. Lynn Vorbrich, MidAmerican Energy Company.
- j. Written testimony of Mr. Keith Luchtel, Iowa Association of Electrical Cooperatives.
- k. Written testimony of Ms. Linda Kading, Iowa Association of Municipal Utilities.
- l. Written testimony of Mr. George Van Damme, Deere & Company.
- m. Written testimony of Mr. John Croushore, Cedar River Paper Company.
- n. Written testimony of Ms. Nancy Lange, Izaak Walton League.
- o. Testimony summary of Mr. David Osterberg, former state legislator.

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- p. Written statement of Mr. Jack Soener, Iowa Association of Business and Industry.
- q. Written statement of Mr. Timothy Wilkinson, Aluminum Company of America.
- r. Information provided by Northern States Power regarding AEP purchases.
- s. Informational material submitted by Mr. Frank Kreith, American Society of Mechanical Engineers.
- t. Testimony outline and other resource material submitted by Mr. Norm Olson, Iowa Energy Center.
- u. Written testimony of Mr. Steve Blake, Windustries, Inc.
- v. Written testimony of Mr. Tyler McNeal, Windway Technologies, and petition from Northwest Junior High School, Iowa City.
- w. Testimony summary of Mr. Paul White, Vestas-American Wind Technology, Inc.
- x. Written testimony of Ms. Teree Caldwell-Johnson, Metro Waste Authority.
- y. Written testimony of Mr. Randy Hartman, Great River Solid Waste Management Agency.
- z. Informational material submitted by Mr. Jim Cooper, Chariton Valley Resource Conservation and Development Area.
 - aa. Iowa Utilities Board proposal.
 - bb. Iowa Utilities Association proposal.
 - cc. Bill draft by Senator Fink.
 - dd. Bill draft by Representative Nutt.
 - ee. Comparison of proposals prepared by Iowa Utilities Association.

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COMPARISON OF AEP PROPOSALS

The Iowa Utilities Board (IUB), Iowa SEED Coalition and the Iowa Utility Association (IUA) have submitted proposed changes to the Iowa AEP law. In an effort to understand the differences between each proposal, a comparison of the major issues has been developed, as understood pursuant to the information presently available. The table shown below includes a description of an issue and how each proposal addresses that issue.

ISSUE DESCRIPTION	IUA	IUB	SEED
1. Existing AEP Contracts	Not affected	Not affected	Not affected
2. AEP Purchase Requirements	Up to 105 MW (contingent on level of state underwriting).	Plan for purchasing 2% of Investor Owned Utility's demand, to be filed within 3 years.	5% of Investor Owned Utility's annual load. 2% level attained by 12/31/97 and another 3% level attained by 7/1/99.
3. AEP Purchase Mix	Type of AEP mix would be determined by the State	No requirement	Proposal addresses size and "technology bands". Purchases must be from 70% large AEPs (greater than 5 MW); 30% small AEPs (5 MW or smaller).
4. Price Paid for AEP Capacity	Competitive Bid	Competitive Bid	Competitive Bid for large AEPs. Small AEPs would receive payment based on AEP's costs (reviewed by IUB).
5. Who pays for AEP Capacity	Investor Owned Utilities pay avoided cost. All Iowans share in paying the remaining amount.	Investor Owned Utilities (or retail customers since retail wheeling is allowed).	Investor Owned Utilities (if retail wheeling, all electric suppliers including Municipals, RECs, G&Ts and Marketers).
6. Green rates	Voluntary programs by each Investor Owned Utility to offset State underwriting.	Investor Owned Utilities may use green rates to offset AEP cost.	Not addressed.
7. Participation	Developers & Investor Owned Utilities.	Developers & Investor Owned Utilities.	Developers & Investor Owned Utilities with 3rd party evaluator.