# Chapter 15
# Extension Energy

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## Contents



## Engineering Extension

Engineering Extension was created in 1982 when the functions of the Kansas Industrial Extension Service and the Kansas Energy Extension Service were merged under a single administrative unit.

Within Engineering Extension are several subprograms. These include:

1) Kansas Industrial Extension Service.
2) Hazardous Waste Technical Assistance Program.
3) Service functions performed for the College of Engineering.
4) Kansas Energy Extension Service, the largest subprogram.

Richard Hayter has served as director of Engineering Extension since its creation.

Administratively, Engineering Extension is linked to the Cooperative Extension Service through the Kansas Energy Extension Service, which is a joint program of the College of Engineering and the Cooperative Extension Service.

## Kansas Industrial Extension Service

Kansas Industrial Extension Service (KIES) was established in 1964 by the Board of Regents to provide the transfer of technology from universities to industries.

The service was a cooperative effort between Kansas State University and the University of Kansas, but KSU was designated as the lead institution.

In July, 1966, Charles Kenneth Razak was appointed head of KIES.

The main function of Industrial Extension was to transfer information, but it also provided for technical assistance and continuing education.

**Information Transfer**

KIES answered questions about all aspects of manufacturing. Information was obtained both on campus and in off-campus repositories.

This service was useful for industries who could not reach these sources or did not know how to reach them.

**Technical Assistance**

Technical assistance was another attractive service that KIES offered. Industries sought advice and assistance with manufacturing processes, designs, material selection, plant layout, marketing, and personnel training.

As for continuing education activities, KIES sought to get away from courses in purely professional areas and focus more on technology-oriented conferences and seminars for foremen, managers and technical employees.

**Cooperative Programs**

KIES sponsored two continuing education programs outside of Kansas State University.

An association at Pittsburg State University dealt with printing and wood technology.

One located in Wichita recruited workers from such companies as Coleman to teach plastics technology.

The continuing education programs at KSU mainly covered management of small businesses and were taught by the business administration faculty.

In July, 1970, William Honstead began serving as Director of KIES.

**Lose Support Funds**

Also in 1970, KIES received its last Federal funding, and state funding, which was never a line-item budget, was severed even earlier. Lack of funding forced a contraction of the entire program.

KIES tried to avoid becoming a consulting program, and this effort became especially strong after funding ceased, so they developed a compromise.

The first visit to a company plant was done without charge, but any extra help had to be done on an individual consulting basis between the plant and the faculty.

The program existed for several more years, until Honstead's retirement in 1982. At that time, KIES merged with Kansas Energy Extension Service under Engineering Extension.

## Hazardous Waste Technical Assistance

In late 1988, funding was received from the Environmental Protection Agency (EPA) from the Resource Recovery and Conservation Act Integrated Training and Technical Assistance Program (RITTA).

This joint venture with the Kansas Department of Health and Environment, the University of Kansas, and Kansas State University assists hazardous waste generators in Kansas in minimizing the waste they produce.

**Training On Control**

KU trains on compliance with EPA regulations, and KSU provides assistance and training on the technology of hazardous waste minimization.

The hazardous waste program provides individual assistance, training, and special publications for targeted industries throughout the state.

**Regional Hazardous Substance Center**

Similarly, in 1989, the U.S. Environmental Protection Agency funded the College of Engineering to serve as one of five regional centers for hazardous substance research.

Dr. Larry Erickson, in KSU's Department of Chemical Engineering, serves as Director of the Center.

Engineering Extension is responsible for coordinating the technology transfer effort of the Center.

The target audience is different from the RITTA program in that it is primarily those who develop new technology in the field.

Conferences, newsletters, electronic bulletin boards, technical resource data bases, etc., assist those who develop the technology in communicating their scientific developments.

John Pellerin will join the faculty of Engineering Extension in March 1990 as the Extension Assistant, Hazardous Waste, and will be responsible for the RITTA programs.

**Radon Measurement/Mitigation**

In late 1988, Kansas State University, in cooperation with the Universities of Minnesota and Michigan, was named as an EPA Radon Training Center.

The KSU portion is directed by Bruce Snead within Engineering Extension. The Center trains contractors on radon measurement and mitigation. It also tests contractors wishing to receive EPA certification.

# Service Function For College of Engineering

Engineering Extension is responsible for media contacts and special publications for the College of Engineering as well as management of off-campus instruction.

**Seminars/Conferences**

In addition it assists faculty within the academic departments in conducting seminars, short courses, and conferences.

**Publication Support**

Special publications include student recruiting brochures, booklets describing special functions of the College such as research activities and centers of research, newsletters, and journals.

Graphic needs such as those for scientific papers at conferences, promotional material for the College, special displays for technical meetings, etc., are produced by Engineering Extension.

**Off-Campus Courses**

Most off-campus courses are offered by video tape, and are graduate level. Engineering Extension also manages specialized credit programs through contract for industrial organizations.

**Video Production**

Engineering Extension is responsible for the video production facility within the College of Engineering. This facility produces video courses as well as other video applications for engineering instruction.

# Kansas Energy Extension Service

The Kansas Energy Extension Service (KEES) was established at Kansas State University to provide technical assistance and advice to energy consumers. Located in Ward Hall, KEES is under contract to the Kansas Corporation Commission.

The point of attachment to the KSU is through the College of Engineering and the Cooperative Extension Service.

**Federal Funds For Energy**

In 1977, the Federal government funded ten pilot states to develop Energy Extension programs, but Kansas wasn't one of them. Kansas State University was awarded a contract in June of 1978 from the Kansas Energy Office.

The contract allowed the University to monitor and evaluate the ten pilot states and prepare a plan for Kansas Energy Extension Service.

The planning staff for writing the proposal consisted of John Dunbar, Director of Extension; Donald E. Rathbone, Dean of Engineering; William Honstead, Director of KIES; Mark Schrock, Extension Agricultural Engineer; and Wilber Ringler, Associate Director of Extension.

The efforts of this committee were rewarded in September, 1980, when the Kansas Energy Office granted the contract for Kansas Energy Extension Service.

Governor John Carlin, who had previously been involved in Extension efforts, made the decision to establish KEES at Kansas State University.

**Energy Extension Staff**

Richard Hayter, the first Director, was hired in May 1980. Prior to his position as Director, he was executive vice president of an engineering consulting firm which specialized in energy management within commercial and industrial buildings.

In January of 1981, Su Bacon became the Extension Energy Editor, and Rich Gardner was hired as graphic design artist.

Doug Walter joined the staff in February as Residential Energy Specialist.

Dennis Matteson was hired as a Small Business Energy Specialist in March.

Gene Meyer, another Small Business Specialist was also hired in March, and located at the Southeast Area Extension Office in Chanute.

This arrangement was actually an experiment to determine the need for an area versus a state-wide specialist. A greater need existed for a sec-ond state-wide specialist, so Meyer moved to the state office on December 31, 1981.

Two new employees joined the growing KEES staff the following year. Bruce Snead and David Boyd were hired as Residential Energy Specialists in August.

**Energy Subcontracts**

In its first three years of operation, KEES drew up two subcontracts, both through Cooperative Extension Service.

One was with the University of Kansas for a program on energy conservation in transportation (including trucking, school buses, and agricultural vehicles).

The other contract was with the Wichita State University and covered energy conservation in government buildings.

**Program Expansion/Realignment—1983**

In 1983 the Kansas Legislature allocated Federal funds to expand the residential energy conservation program. A realignment of programs within KEES resulted from this transfer.

Many previous programs were consolidated, leaving four major areas of emphasis:

1) Business and industry.
2) Institutional.
3) Agricultural.
4) Residential.

**Agricultural Energy Efficiency**

To promote programs in the area of agriculture, KEES funded the department of Agricultural Engineering. The department had previous experience in programs on energy efficiency in agriculture.

The two programs that evolved dealt with irrigation efficiency and energy efficient tractor operation.

Special project funding was halted in 1981, so KEES took over in 1983 and funded the projects for two more years.

**Home/Business Energy**

KEES recognized existing opportunities for reducing energy consumption in homes and businesses. These opportunities ranged from those demanding virtually no investment to those requiring major measures but offering attractive return rates and tax incentives.

Since one of its aims is providing advice and assistance to energy consumers, KEES has responded to weatherization needs in low income housing.

As a residential energy specialist, Doug Walter has been active in this program. Walter's job in the program is to train contractors who are paid to weatherize low income homes.

Mike Dorcey took over Bacon's editorial position in July, 1988. The responsibilities of editor are many, considering the extensive use of the media.

**Energy Materials**

Energy Ingenuity, an annual energy newspaper published by KEES, has a circulation of 35,000.

A weekly energy column, "Ask Energenie," is published in 75 newspapers around the state.

KEES also generates a steady flow of feature stories, news releases, and newsletters concerning energy conservation measures. The editor also helps prepare promotional brochures for seminars and workshops conducted by the specialists.

As graphic design artist, Rich Gardner works mainly with the editor, but also creates displays and designs brochures for workshops.

The first major publication produced by Gardner and Bacon was Improving Boiler Efficiency.

Gardner also helps with the design and lay-out of Energy Ingenuity, which continues to change over the years.

State specialists employed by KEES have three main jobs—writing, speaking, and giving individual assistance in areas of energy conservation.

The programs are classified under two main sectors—residential and small business energy.

**Residential Energy Emphasis**

The first sector assists clients ranging from low income people to homeowners to industries associated with the housing market.

The second serves small manufacturers, commercial buildings, retailers, churches, schools, county and city government, and state buildings.

Up until 1985, the residential energy programs dealt extensively in the area of solar energy. One popular program taught how to incorporate solar systems into existing homes.

Other areas which received a lot of interest dealt with earth-sheltered housing, solar water heating, solar air heating, and weatherization through the use of blower doors.

**Small Business Energy Emphasis**

As small business energy specialists, Dennis Matteson and Gene Meyer conduct programs for commercial and industrial building maintenance.

Site visits, which are done as consultations or surveys, include schools, hospitals, churches, county buildings and private buildings.

Small business energy has also conducted workshops on feedlots through the Kansas Livestock Association, and on locker plant refrigeration through the Kansas Meat Processors Association.

Other workshops conducted by KEES have dealt with boiler operators, steam traps and pneumatic controls.

A future project for small business energy is the State Building Energy Project, which will allow the state to borrow funds for energy saving improvements.

**Energy "Hotline"**

All of the specialists help with "Energy Hotline," a toll-free hotline for energy conservation questions.

***Contributing Author.*** *The primary contributing author on Extension educational programs in Extension Energy from 1982 through 1988 was Richard Hayter, Dir., Engineering Extension Programs.*

**A complete listing of personnel in Extension Energy is included in Chapter 6, Extension Personnel, pp. 50-51.**