



The Ferrum College Energy Initiative

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The Ferrum College Campus



The Environmental Science Program was initiated in 1974



... and is the second oldest in the country



Leadership from the Top



419 signatories to date

**Ferrum College President
Dr. Jennifer Braaten
signed the agreement on
April 30, 2007**



Advanced Energy, Inc.



www.advancedenergy.org

- Private non-profit organization
- Slightly more than half of funding comes from North Carolina electric ratepayers
- Help industry, businesses, residences operate daily lives with less energy



Ferrum College Energy Management Program

Consultant from Advanced Energy

Christina “CC” Maurer



Energy Questions



- How much money is the college spending on energy?
- How much energy is being used by each building/campus?
- How does this college compare to other campuses?
- Can we manage our energy usage better?
- What is the campus impact on the environment?



Energy Management Program



Goal - Create an energy plan that will:

- Prioritize projects to save energy in a multi year plan
- Track monthly/annual energy usage
- Help make better energy related decisions in the future



Energy Management Program – cont'd



Activities of Program

- Collect energy usage information ($\$/\text{ft}^2$, $\text{Energy}/\text{ft}^2$, $\$/\text{student}$)
- Evaluate existing buildings (lighting, heating, cooling, equipment)
 - Operate existing buildings and equipment better
 - Identify areas of to improve or replace equipment
- Assist with implementing energy saving opportunities
- Educate administrators, maintenance personnel, faculty, staff, and students on energy efficiency
- Complement the climate commitment signed by college president



The Organized Approach



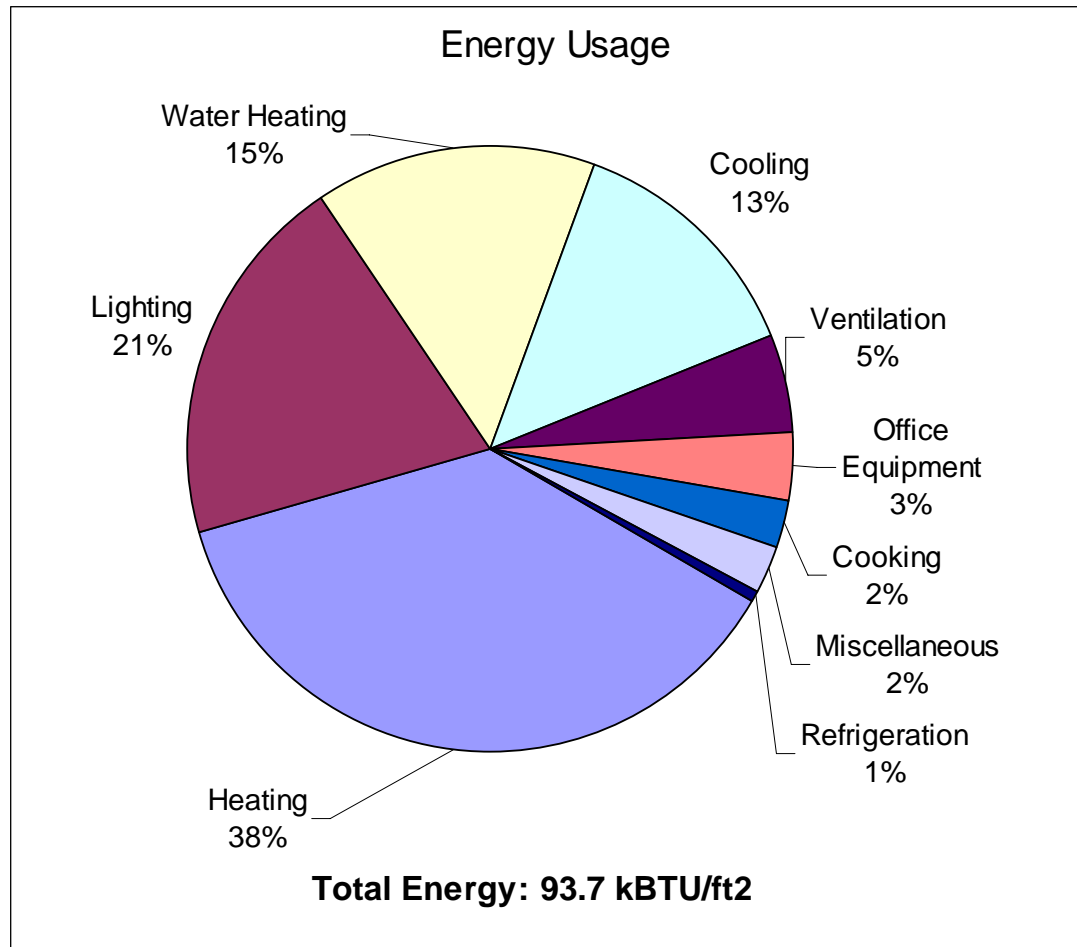
Energy Team represents:

- Mechanical/electrical knowledge
- Responsible utility budgeting
- Event scheduling officer
- Housekeepers
- Students or Interns

Energy Team tasks:

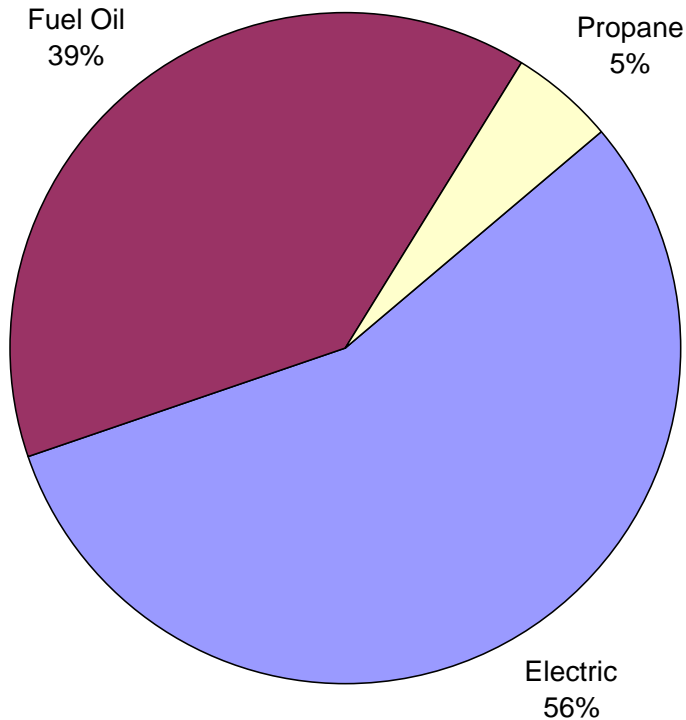
- Evaluate conservation projects
- Meet periodically to monitor progress
- Track energy bills
- Share energy saving tips with campus
- Continuous implementation

Average College Classroom Building Data



Ferrum Energy Facts

Ferrum College Building Energy by End Use (2006-07)



- **Annual Energy Budget: ~\$775,000 (2006-07)**
- **\$645 per student per year (2006-07)**
- **Usage comparable to other colleges of same size/climate zone**
- **Electricity usage up over 25% for 1st month of school compared to last year**
- **Based on US Average, the electricity produces 3,850,000 Lbs CO₂**





Education and Awareness



- Studies have shown that an effective energy education and awareness program can save 3-5% of energy expenses
- In 2006-07, Ferrum spent ~\$775,000 on energy
 - Potential Savings – \$23,000 to \$38,000



Energy Awareness



- Turn the lights out if you leave the a room for longer than 5 minutes
- Use power savings options on your computers
- Setback window air conditioner when possible
- Close windows and doors when the heat or air conditioner is running
- Report faucet leaks or running toilets to maintenance department
- Set thermostat to 76°F for cooling and 70°F for heating
- Use compact fluorescent task lighting
- Purchase Energy Star equipment
- Shutdowns and setbacks during break periods
- Report outdoor lights on during day



Potential Changes This Year



- Lighting Retrofits
 - Compact Fluorescent
 - Energy Efficient Fluorescent and Metal Halide
 - LED Exit Lights
- Heating/Cooling Schedules Where Possible
- Occupancy Sensors

