New $221,000 FEMA grant provides extra fire safety protection for family housing residents.

In 2008, the Chapel Hill Fire Department was dispatched to 1,073 fire-related incident calls to UNC campus buildings. Of these, 330 were cooking-related fire alarms involving burned food, combustibles left on the stove elements and unattended cooking events. The majority of the 330 cooking-related fire calls involved students who stored combustible items on stovetops, fell asleep and left food unattended while it was cooking, or used excessive temperatures to reduce cooking times.

So, Kitty Lynn decided to see what could be done to reduce the number of fire call responses and also provide more protection against cooking related fires. She applied for a FEMA grant and got $221,000 to install more than 500 Safe-T-element™ (STE) cooking systems in specific residence halls, and create an in-depth fire safety educational campaign.

This safety program will directly reduce risk of fatalities and human injury due to stovetop fires for residents of Baity Hill and Ram Village, as well as reducing the risk of fire fighter fatalities and injuries. Over a 5 year period, the six part project will include:

- installation of Safe-T-Elements (STEs),
- training of Resident Advisor’s who will train 8,500 housed students and —by extension— a subsequent outreach population of 42,500 students,
- an informational brochure to be distributed annually,
- a laminated fire safety brochure in each apartment,
- inspections of each stove four times annually, and
- monthly audits of the Stove Top Safe-T-Element program.

**How the Safe-T-element™ (STE) cooking system works:**
Safe-T-element™ is a patented product upgrade for electric coiled stovetops, engineered to prevent cooking fires before they start while reducing the amount of electrical energy required to cook. Each STE is an electronically controlled solid cover plate installed on top of the existing stovetop burner. A patented control unit mounted inside the stove controls the temperature of the plate cover allowing it only to reach a maximum of 662 degrees F when set on HIGH. When the cover plate reaches a temperature of 662 degrees F, it automatically shuts off, and, conversely as it cools to 655 degrees F the stovetop is turned on again. This very effective temperature control allows for effective and efficient cooking while not allowing household cooking materials (oil and grease) to ignite at temperatures approaching 700 degrees F.

**Operational cost savings:**
The project will also provide Chapel Hill Fire Department indirect benefits by reducing a significant percentage of cooking-related calls to the campus. Their total costs for cooking fires involving the UNC population, which occurred in 2008, were $27,207. If those fire calls could be reduced by just 50 percent, CHFD would save roughly $13,603 that could be used for other essential fire prevention and outreach opportunities. In additional to monetary savings, Chapel Hill Fire could minimize the danger of causing pedestrian and vehicular accidents, which could potentially occur during their first responder calls to these cooking alarms.
**Energy savings:**
The long-term energy saving component of Safe-T-element is its use of up to 35 percent less electricity by reducing high stove temperatures. This is a savings of $40.00 per stove per year, resulting in roughly $21,200 savings for the 530 stoves that are to be outfitted.

**Evaluation of the program:**
The EHS department has been recording Chapel Hill Fire Department’s campus-related calls in a database system every month for fifteen years. The database system allows the department to extract different types of fire incidents, and locations of incidents in combinations that have proved to be instrumental in guiding safety education and training. Monthly reports are used to evaluate problem areas and track call frequency, while also providing monthly reports to the Chapel Hill Fire Department, UNC Housing, and Public Safety.