



**PIONEERING
TECHNOLOGY**

The Home Safety Cookbook

***“All the Ingredients You Need to Permanently Reduce
Unattended Cooking Fires.”***

We at Pioneering Technologies Corp. want to thank you for taking advantage of this opportunity. We feel confident that it will help your efforts to combat the number one cause of fires in the US, unattended cooking.

This “cookbook” was designed to provide the recipe, or tools you need to help you in your efforts to permanently reduce these fires before they start by incorporating education with proven engineered solutions.

Since this year’s NFPA Fire Prevention Week theme is “Prevent Kitchen Fires”. We designed this program to serve as an adjunct to your normal fire prevention week materials. We hope this proves to be a tool that will go beyond Fire Prevention week and become a part of your permanent fire and life safety “toolbox”.

Thank you again for taking advantage of this “Cookbook”. Let’s make this year’s Fire Prevention Week the one where we finally begin the process of “permanently” reducing these fires for our citizens now and the generations to come.

Your Home Safety Cookbook includes:

- Curriculum to help promote behavioral changes.
- Tools that you can use to teach and promote permanent engineered solutions for these incidents.
- PSA scripts, a web based article, form letters, and scripts to educate the public, media, and local decision makers in your communities.
- Resource materials to help you in your efforts to prevent these fires.
- Evaluation tools and techniques for all the materials.

Public Education Curriculum

Introduction and Scope

This class is intended to give you the tools you need to provide the latest in information and technology to your citizens to “permanently” reduce unattended and stovetop related fires. If you have any questions please feel free to contact us at: ediment@pioneeringtech.com 503-819-2417, or www.pioneeringtech.com

The recommended total time for this presentation is 45 min-1HR with time for questions. This presentation is designed to be used by a fire or risk management professional. The intended audiences are the general public or housing providers. The intended purpose is to teach general safe cooking behaviors and to introduce and provide an understanding of technologies that provide permanent solutions for these fires.

There are specific technologies included in module 3. Module 3 can also be used as an orientation class in the event you have buildings that are incorporating any of these technologies. There is also a resource directory included that will provide a pre/post test, plus a list of educational adjuncts for promoting engineering solutions.

Scope:

- This class is designed to cover the scope of the problem of unattended cooking and fires related to the stove-top, the common issues and what people can do to prevent them.
- It will also talk about specific engineered solutions designed to reduce or eliminate unattended cooking fires and nuisance alarms on electric coil ranges, gas ranges, and microwave ovens.

Cookbook Table of Ingredients

Instructors Script and Suggested Outline.

Module 1. Definition of the Problem, Public Education Curriculum.

Module 2. Public Education Curriculum for Senior.

Module 2. Engineering Solutions and How They work.

Module 3. Evaluation.

Resource Directory

- 1. Pre and Post Test for Educational Curriculum.**
- 2. News Releases, Web based Messaging, and Scripts for Engineered Solutions.**
- 3. Cooking Fire Facts/Solutions**
- 4. Administrative Presentation for Public Officials.**
- 5. 5 Step Process for Mandating Solutions for Unattended Cooking Fires.**

Instructor's script or suggested outline:

Today we will be talking about kitchen fires and what you can do to keep you and (your family / your residents) safer.”

“We will be talking a little about how big a problem these fires are in your community, the major causes, and why it's even more important to be aware of these hazards if you live in an apartment.”

“We will be giving you the information you need to prevent these fires, and also show you some types of technologies that actually make your stove or microwave oven safer.

“Finally, we will make time at the end of the class for any questions you may have. **Administer pre-test at this time (optional but recommended).**

MODULE 1

Definition of the Problem, Educational Solutions

Instructors notes:

Facts & figures from NFPA's Cooking Fires 2010

In 2010, cooking was involved in an estimated 156,400 home structure fires that were reported to U.S. fire departments. These fires caused 410 deaths, 5,310 injuries and \$993 million in direct property damage. Cooking caused 44% of reported home fires in the US 16% of home fire deaths, 40% of home fire injuries, and 15% of the direct property damage in 2010. Canadian statistics for subsidized low-income multi-family housing puts that percentage of total fires at 67%. **And it is increasing every year. (I would recommend including your state and local statistics.**

So where you feel safest, your home is where you are most likely to have a fire. While the statistics are similar between single family and apartment buildings there are some unique issues that make it even more important if you live in an apartment.

Simply put, your home is attached to your neighbors and their neighbors. This means that you are only as safe as the least safe person in your building. In short, it pays to be a good, (fire safe) neighbor. This class is designed to give you the information and tools you need to do that.

Safe Cooking ideas

- Don't leave the kitchen when you are frying, or broiling food unless you turn off the heat.
- Keep anything that can catch fire away from your stovetop.
- Keep the stove clean, inside and out, pay particular attention the drip plates for grease buildup.
- You should maintain a "Kid free zone around your stove.
- If you have a cooking fire, when in doubt, just get out and call the fire department.
- If a small grease fire starts in a pan, smother the flames by carefully sliding the lid over the pan, use a pot holder to help avoid burns. Turn off the burner, and leave the lid on until the pan is completely cool.
- If a fire starts in the oven, turn off the oven and leave the door closed. If the fire is generating a lot of smoke you should call 911.
- To prevent cooking fires, you have to be alert. Try to avoid cooking if you have taken medicine or drugs, or consumed alcohol that makes you drowsy.

Burn Prevention

- Turn pot handles in and use the back burners when possible.
- When cooking, wear short, close-fitting sleeves. If your clothes do catch fire; stop, drop, and roll!
- Burns require immediate attention. Cool the burn with cold water for 3–5 minutes. Cover with a clean, dry cloth. If the burn is bigger than your fist, or if you have questions about caring for the injury, get medical help right away.

One of the most common causes of burns with unattended cooking fires happens when trying to fight the fire, here's a tip, **don't**, but if you do, follow these rules:

- If the fire has moved beyond the stove top leave the room, **close the door** and call 911 from outside the house.
- Never attempt to move the burning pan outside or to the sink.
- Never use water on a grease fire, it will spread the fire.
- **If you do try to fight the fire, be sure you have already alerted 911** and others are getting out and keep the exit to your back so if the fire grows your escape will not be blocked.

What to do if:

You have a minor burned food event:

- If you live in an apartment and burn the food and need to clear the smoke remember to use the outside window. Never open the door to the hallway to clear the smoke. Smoke inside your apartment, sets off your smoke alarm, smoke in the hall will set off the alarms for the entire building.

If you have a burned food event or cooking fire that extends beyond the range-top:

If you live in a house:

- Alert everyone and leave the house and meet at your “safe meeting place”.
- Call 911 from your meeting place with a cell phone or call from a neighbor's house.

If you live in an apartment:

- Make certain to close the door to your apartment to keep smoke out of the halls so everyone can get out safely.
- Know how to, and activate the alarm as you leave the building.

- Follow all the instructions if your building has an escape plan, if not make sure your family has a designated safe meeting place at least 50 feet from the building.

If you are unable to evacuate because of age or a physical injury or disability or are just unable to manage the stairs comfortably:

- The majority of injuries for older adults when a fire occurs happen when they attempt to leave the building. If you have problems getting around and stairs are a challenge, talk to your manager and or local fire department about developing a “shelter in place” program for your building.

Module 2

Senior Curriculum

Instructors Notes

Instructors notes:

Class consists of lecture, videos, and discussion. The recommended total time for this presentation is 45 min-1HR with time for questions. This presentation is designed to be presented by a fire, risk management professional, or representative of the technology. The intended audience is building managers or residents. This class is designed to stand alone as a prevention class whether Safe-T-element® or Safe-T-sensor® are being purchased, already in use, or not. Although the class will stand on its own and includes statistical data, local loss data or building history are much more effective than just repeating national statistics and should be included to localize the problem.

The instructor’s scripts for each section are only meant to serve as a template to help you with your planning and delivery. If this class is presented to the residents there are some specific delivery issues that you do need to take into consideration when addressing a senior audience. Some of these are style related and others simply a matter of logistics. Some things to consider when teaching to a senior audience are:

- Speak clearly and slowly and make sure to make good eye contact
- Avoid videos or learning adjuncts with loud background sound tracks.
- Make sure all your printed materials are large font and the background is not too busy. Yellow is a good color as a background because the print stands out and is easier to read.

- Don't overload them with information, and make sure it's relatable.
- If possible, involve them in the discussion and reinforce your points with practical use examples.
- This class is designed to cover the scope of kitchen fires as a problem in senior housing, what is causing them and what the resident can do to make themselves safer.
- It will also cover the specific issues that relate directly to older adults.
- It will also serve as a tutorial for two specific engineering solutions designed to reduce or eliminate unattended cooking fires and nuisance alarms as they pertain to electric coil stoves and microwave ovens.

Template for the Instructors script:

“Hello, my name is _____ I am from _____ my job is to _____ “

“Today we will be talking about kitchen fires and what you can do to keep: you and (your family / your residents) safer.”

“We will be talking a little about how big a problem these fires are and the major causes and why it's even more important to be aware of these hazards if you are getting up there in age.

“We will also give you tips on what you can do to help prevent these fires and stay safer (in your own apartment / home.) Part of the class will also show you some new products and how they work, that (are available/are being installed) to make your (stove and or microwaves safer.”)

“Finally, we will make time at the end of the class for any questions you may have. But feel free to speak up at any time during the presentation/ after the video, if you don't understand something or I haven't been clear just ask. This class is for **you** so you know what to do to feel safer in your home.

Definition of the Problem

Instructor's notes: Read your audience as to how much of the initial facts they need.

Facts & figures from NFPA's Cooking Fires 2010

In 2010, cooking was involved in an estimated 156,400 home structure fires that were reported to U.S. fire departments. These fires caused 410 deaths, 5,310 injuries and \$993 million in direct property damage. Cooking caused 44% of reported home fires, 16% of home fire deaths, 40% of home fire injuries, and 15% of the direct property damage in 2010.

- Unattended cooking was by far the leading contributing factor in these fires.
- Two-thirds (66%) of home cooking fire started with the ignition of food or other cooking materials.
- Clothing was the item first ignited in less than 1% of these fires, but these incidents accounted 14% of the cooking fire deaths.
- Ranges accounted for the largest share (58%) of home cooking fire incidents. Ovens accounted for 16%.
- Three of every five (58%) reported non-fatal home cooking fire injuries occurred when the victims tried to fight the fire themselves.
- Most seniors are injured while trying to escape the fire.
- Seniors over 65 are twice as likely to die in a fire, over 75 three times, 85 four times.

The risk goes up for seniors for a number of reasons. As we get older things just don't work as well and that can cause for more problems, here are a few:

- You may be less able to take quick action if necessary in a fire emergency due to physical, visual, and hearing impairments
- The medications you are taking may affect your ability to make quick decisions or responds in a timely fashion
- Diminished awareness due to medical reasons can slow reactions of make you forget.
- You may not have others around to help during a cooking fire.

Educational Solutions

Here are some tips for making cooking safer for seniors.

Never leave food unattended

Most kitchen fires occur because food is left unattended on the stove or in the oven. Never leave food that is cooking on the stove unattended. Never leave the kitchen even for a short time when food is frying, grilling, or broiling. Don't leave the house if food is simmering, baking, or roasting.

Handles

Keep pot handles turned inward. When handles are turned outward, or even to the side, they can be easily bumped, causing the pot to spill or fall over.

Select the right pots and pans

If you have arthritis, Parkinson's disease or general muscle decline, heavy pots and pans are an accident waiting to happen – especially if the pan is full of grease, which can easily ignite if spilled. Products that can help: two handled pans allow the senior to lift and maneuver hot heavy pans with more stability.

Be aware of clothing

Avoid wearing loose clothing with flowing sleeves while cooking. Robes, house dresses and other garments that may be comfortable for you often have extra loose sleeves that could potentially catch fire if they get too close to a hot burner.

Clear the clutter

Keep cooking surfaces and surrounding areas free from clutter. Use pot holders and oven mitts, but keep them away from the stovetop when not using them. **Keep things that can burn off the stove top.**

Clean surfaces

Clean cooking surfaces regularly to prevent grease buildup, which can start fires, pay particular attention to grease build up in the drip pan.

Microwave ovens

They can be safer but the food still gets hot. Be careful and use an oven mitt when removing plastic wrap or lids from containers to keep from getting burned by the steam. The buttons can be confusing so pay close attention setting the timer.

MODULE 3

Engineering Solutions and How They Work

SafeTelement®, **SafeTsensor™**, **SafeTburner™**, and **RangeMinder™** are examples of technologies that drastically reduce the number one causes of unattended cooking fires, burned food responses, and evacuations due to burned food on both electric and gas ranges, and microwave ovens. The importance of these solutions is that they intended to regardless of the inappropriate actions or inattention of the resident.

Cooking with TLC, “Temperature limiting Control”

SafeTelement® (STE) consists of a cast iron plate that is clamped to the burner of your electric coil and a circuit control board. The cast plate has a built in sensor to detect how hot the cast iron. Once installed the circuit board regulates the temperature of the cooking surface to just below auto-ignition or 662 F. At this temperature your food or oil won't catch fire when you cook, or anything else that gets close to the burner. At this range of temperatures your stove will now perform a bit better than a ceramic top stove. You can still boil, fry, or sear, but unlike a ceramic top stove, if something happens to distract you your stove will not get hot enough to start an unattended cooking fire. Because of how the technology works a stove with the Safe-T-element© system installed also uses about 25% to 50% less energy than it would normally use to cook the same meal.

Cooking with TLC, SafeTburner

We are asked the following question all the time, “Why can't I get the Safe-T-element® for my house or for my parent's house?” Now there is an engineering solution to help prevent stovetop on electric coiled stoves that is easy to install and provides all of the benefits of the original. The new Safe-T-burner™ delivers all the benefits of the original STE with these advantages:

- Now available for anyone – no professional installation required.
- Still maximizes cooking without being a nuisance.
- Is easy to use, simple to install and convenient to maintain.
- No change to cooking behavior other than ensuring attentiveness.
- Still saves energy, avoids burning foods, extends cookware life.
- Like Safe-T-element® it still helps minimize smoke alarm activations and nuisance calls.
- Helps save lives, reduce injuries, protect property and loved ones.

Cooking with SPC, Sensor, Power Control Technology

SafeTsensor™ (STS) is a technology designed for the microwave oven which is one of the leading causes of nuisance alarms. Safe-T-sensor© is a photo-electric sensor that magnetically attaches to the outside of the microwave, just above the vent. It has a cord that is attached to a receptacle that goes into the regular outlet. The microwave then plugs into that receptacle so that at first sign of smoke the Safe-T-sensor© immediately interrupts the power to microwave.

Cooking with a “Friend” RangeMinder™

RangeMinder™ is one of the newest members of Pioneer’s stovetop technology group. This technology replaces the normal control dials for “intelligent” ones on a gas or electric range. Now each time the stovetop is turned on a message is wirelessly sent from the individual stovetop dial to a “control box” indicating the cooking temperature for that dial and its corresponding burner element. Auto-ignition times on all stove top types, gas and electric, have been programmed into the software so that the control box. Now the control box will emit an escalating, low frequency beeping sound to remind the resident if they have left the stove unattended or that a dangerous situation may be imminent and the stovetop must be attended to.

The pre-determined times are as follows:

- If the dial is turned to “high” a beeping sound will occur after approximately 4-5 minutes.
- If the dial is turned to “low” a beeping sound will occur after approximately 50-60 minutes.
- If the dial is set between “low & high” the timer will be activated accordingly between 4-60 minutes.
- In this way the cook is reminded to return to the stove based on their individual temperature setting & will not be interrupted when there is no immediate danger.

When the control box beeps the cook simply needs to return to the stove and gently touch any one of the dials to re-set the timing device which will reset the time based on the dial with the highest temperature setting to ensure there isn’t a symphony of beeps if the cook is using multiple elements. If a resident fails to return to the stove when alerted, the beeping sound will escalate to higher decibels and a more frequent rate forcing the cook to return to the stove to monitor their cooking situation.

MODULE 4

Evaluation

Quantitative: Educational gain (risk reduction)

- Administer the Pre/post test before you give your presentation, then re-administer the test after you complete your presentation and compare the difference in scores to measure educational gain. (See resource directory for the pre-post test, and other educational adjuncts available.) You can also use the pre/posttest to go back to the same group at 6 months to measure long term retention.
- Make sure to document and number of attendees.

Quantitative: (loss reduction.)

If you are teaching this class to a group that will be installing any engineered solutions then you should set up an evaluation component to measure actual loss reduction.

The most effective way to accomplish this is to work at the building level and with your own run data. In the case of multi-family they will have a record of incidents of fires, evacuations, etc. involving that building. This makes it very easy to compare before and after data once the installation has occurred, you **can** prove the fire that never happened.

Qualitative: I recommend either video or still pictures to document your presentations. Smiling faces and active participants show your program in a good light and help support the continuation of your programs with the powers that be.

RESOURCE DIRECTORY

Pre and Post Test

1. What is the number one cause of kitchen fires in the United States?
2. If you have a grease fire what should you do if you choose to put it out?
3. When small children are present what should you create around your stove?
4. When you evacuate your home or apartment, where do you go?
5. What is it about apartment living that makes it even more important that everyone be fire safe?
6. What does Safe-T-element® do to your burner to make it fire safe?
7. How does Safe-T-sensor® for microwaves stop burned food alarms?
8. If you are frying and you have to leave the stove to do something like answer the phone what should you do first?
9. To minimize spills and prevent burns when you are cooking what should you do with your pans?
10. What is one of the major causes of injuries during a cooking fire?

Answers:

(1)Unattended cooking fires.,(2) Smother it with a proper fitting lid.,(3) A safe zone.(4) Your safe meeting place.,(5)All your homes are attached.,(6) Keeps it from getting too hot.,(7)By sensing smoke and shutting off the power.,(8)Turn off the heat and take the pan off the burner.,(9)Turn the pot handles in.,(10) Attempting to fight the fire.

Your Letterhead

For Immediate release

Date

A New Tool for Fire Prevention

Did you know that over 43% of all fires in the home are caused by cooking equipment?

Every year we see the costs of fires that start on the stove often with tragic results. Cooking fires are also still increasing dramatically throughout the country, despite the best efforts of the fire service to prevent them.

Why are those efforts falling short? Because everyone cooks every day and education and awareness are the only real tools the fire service has had to combat these fires in the home.

Why can't the fire service do more? Because we can regulate a business that serves the public but your home is your castle. But now there is another solution.

“There is an affordable engineering solution for electric stoves that has been around for years preventing these fires before they start.” This is a technology solution that is finally gaining traction. Over 90,000 of these devices have been installed on electric coil stoves in multi-family, student, and military housing around the world. **In every case once they have been installed, there has never been another reported fire on that stove,** with the additional benefit of reducing energy use and maintenance costs which literally pays for the technology.

Let's start **eliminating** these fires for good make this solution a part of your “Fire Prevention Week” message

For more information contact; _____ or go to:

www.pioneertingtech.com and look for SafeTelement.

Date

Your Letterhead

For Immediate Release

“Stop the Number One Cause of Fires and Alarms on Campus”

Take advantage of “Campus Fire Safety Month” and “Fire Prevention Week” this year by eliminating the number one cause of fires and burned food evacuations on your campus.

How do I do that?

By promoting and installing two proven engineering solutions for your campus housing.

What are these solutions?

One is a high end heat regulating system that will retrofit onto existing electric coil ranges that prevents fires before they start and as an added bonus reduces the electrical use of the stove by as much as 50% literally paying for itself in energy savings.

The second is a photo-electric smoke detection device that magnetically attaches above the vent of the micro-wave. At the first sign of smoke from the vent it cuts power to the microwave. By shutting off the microwave quickly it keeps the smoke from putting the building into alarm thus reducing evacuations and fire service calls.

Are they proven?

Both technologies are in use in college housing all over the country. In every case they have done exactly what they claim to do.

Where do I research this? For more information and case studies go to _____ or www.pioneeringtech.com and look for SafeTelement and SafeTsensor.

Your Letterhead

For Immediate release

Date

A New Tool for Fire Prevention Week

Fire Prevention week is right around the corner, this year's theme is "Prevent Kitchen Fires". What is the leading cause of kitchen fires in the home?

Unattended cooking.

Every year we see the costs of fires that start on the stovetop often with tragic results. Cooking fires are also increasing dramatically throughout the country, despite the best efforts of the fire service to prevent them.

Why are those efforts falling short? Because everyone cooks every day and education and awareness are the only real tools the fire service has had to combat these fires in the home.

Why can't the fire service do more? Because your home is your castle even if your castle is attached to your neighbors. But now there is another solution.

"There is an affordable engineering solution for electric stoves that has been around for years preventing these fires before they start." This is a technology solution that is finally gaining traction. Over 50,000 of these devices have been installed on electric coil ranges in multi-family, student, and military housing around the world. **In every case once they have been installed, there has never been another fire on that range's stovetop,** with the additional benefit of reducing energy use which literally pays for the technology.

Start **eliminating** these fires for good, starting with this "Fire Prevention Week".

For more information contact; _____ or go to:

www.pioneertingtech.com and look for Safe-T-element.

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Date:

From:

PRESS RELEASE

A Proven Engineering Solution for Unattended Cooking Fires

What: Affordable high end heat limiting technology that eliminates unattended cooking fires on electric coil type ranges **before they start**.

How: By keeping the temperature of foods and cooking oils below their auto-ignition temperature without adversely impacting cooking performance.

Where: This technology is already being used and endorsed in Military, Low income, Senior, and University housing internationally.

Why: Unattended cooking continues to cause more residential fires than any other source, is on the rise nationally, and education alone is not enough.

Who: This technology is currently being endorsed by fire service professional throughout the country, some of these include: The International Association of Fire Chiefs, SE Section of the International Fire Chiefs assoc. The Canadian Fire Chiefs Assoc.

Results: There are currently over 100,000 stoves equipped with this technology in the highest risk occupancies for these fires. The buildings where these units were installed all had a documented history of a significant number of unattended cooking fire events. To date, not a single fire has been recorded in these buildings after installation.

FOR MORE INFORMATION CONTACT:

_____ or _____ or go to: www.pioneeringtech.com

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Web based article for Unattended Cooking Fires

Are you ever concerned about your older mom or dad forgetting something on the stove? Does it ever worry you that your children might get distracted when you're not there by friends or TV and catch the kitchen on fire? Have you ever come home from a night of partying and decided to cook and then nearly fallen asleep? If you said yes to any of these questions, welcome to the club!

Forgetting something on the stove or leaving things like towels or paper sacks too close to the burners causes far more home fires than any other cause. That's true for your hometown and the rest of the country as well, and the numbers keep going up every day.

We talk to our children and parents, we try to be careful, but the truth is even if we do our best, it is just too easy to get distracted. I was a firefighter for over 25 years and I've done it, and I'll bet you have too. Many times we get lucky... but it only takes once.

So the question is this; if you could fix your stove so that even if you forgot, it wouldn't, would that sound like a good idea? Well you can, and it's affordable, and it even saves you money on energy.

It's a device that you use to limit the temperature of your stove so that things never get hot enough to catch fire. Your stove will still cook just fine but food, towels, oil, sleeves, or anything else that touches the burner won't catch fire.

If you think this is something you would like to find out about, ask the nice folks at your local fire department. You can also check it out at www.pioneeringtech.com. You can fix this problem permanently... or you can count on staying lucky.

Cooking Facts and Engineered Solutions.

Cooking is the Number 1 cause of fire in the United States. The NFPA reports that in 2011, cooking was involved in an estimated 156,300 home structure fires reported to U.S. fire departments. These fires caused:

- 470 deaths,
- 5,390 injuries, and
- \$1.0 billion in direct property damage.
- Only 1 in every 30 stovetop cooking fires is reported (CPSC).

Cooking caused 44% of reported home fires in 2011 and as a percentage of overall household fires has increased steadily since 1980 from 20%.

Education is a key component in the fight against kitchen fires but engineering solutions are the only way to help eliminate them permanently.

Pioneering Technology Corp. is North America's leader in cooking fire prevention technologies. Its Intelligent Cooking Systems can help you this year in your efforts to prevent and eliminate cooking fires and nuisance calls in your jurisdiction. Pioneering's products can also help reduce the cost of providing fire services in your community.

Solutions in the Fight Against Cooking Fires  **PIONEERING TECHNOLOGY**
Pioneering Innovation Makes Everyday Products Better.

- Prevents unattended cooking on all stovetop types (gas, ceramic, & electric coil). **New product.**



- The original Safe-T-element prevents cooking fires – B2B aftermarket



Leader in Kitchen Safety Technologies



- Prevents microwave fires and false alarms.



- Prevents Cooking fires on electric coiled ranges. **New B2C version of STE.**

safeT products™
Intelligent Cooking Systems

Cooking Fire Prevention

- New ranges with the STE pre-installed. Available B2B on all range models



Administrative Presentation for Public Officials

This presentation is designed to give city and government leaders a sense of the growing problems associated with unattended cooking fires and nuisance alarms and introduce them to technology that will drastically reduce both. This presentation will also serve to show how those reductions make good fiscal sense that goes well beyond just the safety of the citizens and first responders.

Because in all likelihood this presentation will be to move forward on an ordinance or mandate for one or both of these new types of technologies. It is very important that you do not lead with a brand name. What you are asking for is a generic technology, for example when an ordinance for smoke alarms is passed it is just that smoke alarms, not First Alert, or Kidde. For the purposes of these technologies you are referring to temperature limiting control or (TLC). Or Sensor/power control technology. (SPCT). It is perfectly acceptable to use the Safe-T-element© or Safe-T-sensor© demonstration units but avoid relying on the products themselves.

Some Tips to Start:

- Some set up points and tips for this presentation:
- You need to show the scope of the problem. Have solid national and local statistics.
- Make sure everyone has a copy of any support documentation you have.
- When presenting if you have a demo unit make sure that it is on and heating up before you start your presentation.
- For TLC you will probably want to target replacement and all new stoves used in tax supported housing in the jurisdiction with a full compliance timeline of 5-10 years.
- For SPCT you will probably shoot for hospitals, schools, city buildings, high rise B occupancies, basically public, public/private buildings that would constitute a significant evacuation.
- This presentation was developed to give you a template and is only meant as guideline. However it is not inappropriate to read testimony to stay on track and within time limits.

Draft Presentation to Council/Board

The purpose of this presentation is to request the council/_____ move to pass ordinance### to mandate TLC/SPCT in _____properties

Cooking related fires are the number one cause of residential fires making up over 40% of all reported residential fires. These fires have continued to increase in spite of the best prevention education efforts of the fire service. There are a number of reasons for this.

- Reduced prevention budgets.
- Target audience's resistance to behavioral change.
- Increases in highest risk populations for these fires, low income and seniors.
- The fire services enforcement jurisdiction does not extend inside the front door of a private residence whether that residence is a single family home or apartment.

The fire services only real means of reducing these fires is through public education, which is traditionally the first thing cut during difficult economic times. However, even during the best of times these fires have still proven a very difficult problem to solve with moderate success at best.

The reason for this is that a majority of these fires and burned food events occur in multi-family, low income and senior housing. The low income and senior populations have traditionally been our most challenging demographics to impact through behavioral change.

Because these fire have been such an ongoing problem the fire service there has been interested in the development of a fire safe stove for decades. The manufacturers have been slow to respond on their own to this problem but now there is a proven technology being used all over North America that does just that. Once installed it makes the cook top of an electric coil range "fire safe" and more energy efficient.

This technology is called temperature limiting control or, (TLC) for short. This technology can be retro-fitted to an existing stove already in place, or pre-installed before the delivery of a new coil type stove.

So how does it work?

Temperature limiting control or (TLC) works by reducing the temperature under the pan to the point where auto-ignition of oil, food, clothing, etc. will not occur, but cooking quality is not compromised. It does this by means of a cast iron plate clamped to the element with a thermal couple or heat measuring device.

The element underneath the cast plate will still get as high as 1200 degrees F, but the surface of the plate that is in contact with the pan never gets hotter than 662 degrees F. At temperatures just slightly higher than 662 degrees F food, oil, and common combustibles will all auto-ignite.

The technology regulates the cast iron cooking surface heat by cycling the burner underneath off and on. Because the cast iron retains heat and cools slowly the stove now uses less energy to cook, savings can be up to 50% or more depending on the amount and type of cooking that is being done.

Another growing challenge for the fire service and housing providers are nuisance or burned food calls. This is an issue that has grown even faster than cooking fires. The major contributor to these alarms is burned food in microwave ovens. This is particularly true in apartments, college dormitories, hospitals, and high rise business buildings.

A companion technology that was developed upon request by the Universities already using TLC was designed to combat this growing problem. Sensor/power control technology or (SPCT) consists of a sensor that magnetically attaches to the side of the microwave. This sensor is attached to a receptacle that plugs into the wall socket. The microwave then plugs into the receptacle. At the first sign of smoke it shuts off the microwave oven before it can generate enough smoke to cause an alarm.

At this point you can provide a physical demonstration of the proposed technology or show a short power point. This will be product oriented, but you can point out that this is simply a product that currently uses the type of technology that you are trying to require.

Ask the question for them. “So why does this rise to the level of city or county involvement for a fire department problem?”

Answer: Because you have it in your power to provide a green solution for our city/residents that will;

- Improve safety for the citizens and first responders.
- Save the jurisdiction money through a substantial reduction in call volume and costs related to these fires.
- Leverage additional resources for the jurisdiction through energy and life safety grants and green initiatives.
- Protect valuable infrastructure in the form of low-income housing stock.
- Save money for the housing authorities and businesses affected by the ordinance.
- Save energy producing a “greener” carbon footprint for the city/county.

To the points above, the first, safety to the citizens is fairly obvious, less fires less hazard. But it goes beyond that. The reduction in fires is significant one major fire in a large apartment

building can be devastating in terms of loss of life, displacement of families, and property that will have to be replaced.

What I want to address is the issue of call volume. This takes into consideration both fires and nuisance alarms. The majority of these will be smoke scares or nuisance alarms. But to just consider these a nuisance is a mistake. Smoke scares create an evacuation and code three responses. The majority of injuries for older adults occur while trying to evacuate and again that occurs regardless of whether or not there was an actual fire.

For first responders, nationally the number one cause of injury is due to response either through traffic accidents or health issues like heart attacks. Again, this happens regardless of whether there is a fire or not.

As far as resources, runs cost money. Here _____ it costs the taxpayers \$\$\$\$\$ every time we roll on one of these calls. With the microwave technology alone it has been documented to reduce on campus run volume by as much as 92%. In that case it was estimated that the savings to the tax payer came to just over \$200,000.00 in the first full year the technology was in place. **(For this case study: University of Ohio, Athens Ohio, power point presentations, or any other support document you need go to) : www.pioneeringtechnology.com** or feel free to contact us by phone. (503)819-2417 or (905)712-2061

With the stove technology (TLC) there has never been a reported stove top fire on any stove equipped with this technology. Remember that this technology is installed in the highest risk occupancies for these types of fires. To date there are well over 100,000 electric ranges in low income military and senior facilities already equipped with TLC, some for over 8 years.

In addition (TLC) will pay for itself in as little as 2-5 years through energy and maintenance savings for the housing providers. After which it will lower their overall operating costs for the rest of the life of the stove.

This type of technology is recommended by the International Association of Fire Chiefs, and is already mandated in military code, major housing authorities throughout North America, and is eligible for tax credit in 6 states for inclusion in new and existing tax supported low income housing.

For more information please visit www.pioneeringtech.com to obtain additional support documentation, product information and other information that may be beneficial to help supplement these modules.

Thanks for taking advantage of this valuable tool to make your citizens safer. If you have any other questions or recommendations on how we can make this a better tool for you please feel free to call us at (503)819-2417 or (905)712-2061

5 Step Process to Mandate for the Reduction of Unattended Cooking Fires

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This document is a fairly generic process that the fire service (or anyone for that matter) has always used to successfully mandate an engineering solution be it through; code, policy, or legislature at the local, state, or nationally level.

The key issues before starting the process are;

- A solid understanding of the technology and it's benefits and limitations
- The demonstrated need for the solution
- Having the infrastructure in place to facilitate the ordinance
- Identification and understanding of all the key stakeholders
- A solid understanding of the SWOT's, (Strength, weaknesses, opportunities, and threats) to the process.
- SWOT's can be in the form of, but not limited to;
 1. Identified issues with key stakeholders
 2. Political climate
 3. Resources available to support the enactment of a mandate.

One of the most critical issues in this process will be a good "read" on the climate locally to determine if the best place for a mandate will be handled through the city, relegated to the housing authority, or for that matter at the state level.

With any change like this it is important to identify the path of least resistance, while at the same time meeting your needs of implementing a mandate that will create a safer environment for your residents and firefighters. Regardless of the path you choose this process will be fundamentally the same.

Step one

Identify the Problem locally: (knowledge base)

Gather as much information locally on the extent of the problem over the last 5 years, so you not only have numbers but can show the trends i.e. unattended cooking fires, burned food incidents, nuisance alarm runs related to ranges and micro wave ovens. Then document where they are occurring most frequently, and are the trends showing an annual increase. Then tie it into the most practical target. That will most likely be tax supported housing. This is the best demographic to take on because not only will you reduce loss, there is a direct savings to the taxpayer. In the event that you do not have a good data source locally through your emergency response data you can look to:

- Capture any data the housing authority is keeping locally.
- Non-profits that may be providing housing or re-hab.
- Look to the local insurance carriers for data.
- Local fire equipment distributors that work with multi-family housing.

(Note) this process will also allow you to identify the same data sources you will use to evaluate the positive changes to prove that the mandate meets the goals of reducing loss once it is enacted.

If you want to beef up your data:

- Collect national data on the problem and 5 year trends for multi-family/low income housing, or a targeted demographic that you identify. (This should be done anyway to help support your case for need and will help if you decide to go beyond local ordinance in the future.)
- Identify the number of multi-family/low income housing properties, or most at-risk properties in your jurisdiction.
- Compare the properties and demographics in the national statistics to show you have the same types of properties and demographics locally.

(Note) if you can't make the case locally for the problem through hard data you should explore the possibility of encompassing a larger area for your ordinance. This could be accomplished through the housing authority if they serve more than one jurisdiction.

In this case it may be more logical to work through the housing authority to require replacement mandates for the engineering solution to be included on any new stoves purchased by the housing authority rather than a local ordinance with the city. This will still get you where you need to go locally. However even in this process you will still go for support from your local government to help with the process.

Step 2

Understand the Technology: (Becoming a Champion for the process)

Work with your local distributor for Safe-T-element™ or Safe-T-sensor™ or directly through the Chief Safety Officer for Pioneering Technology Corp. so you have a complete understanding of the technology. That understanding should include:

- A complete understanding of how and why it works, and the components of the product.
- The advantages of installing the product that go beyond just that it reduces/eliminates fires or nuisance alarms. You should understand:
 1. Costs.
 2. Energy savings.
 3. Maintenance cost savings to the building.
 4. Tenant AND Fire fighter safety.
 5. Political advantage for the jurisdiction and cost savings to the tax payer.
 6. Ability to generate additional revenue streams for the jurisdiction.
 7. Why traditional methods to reduce these incidents aren't enough and an engineering solution is necessary.
- A complete understanding of the applicable laboratory testing and certifications on the technologies.
- Educational needs for the residents and building managers on use and maintenance when incorporating these new technologies onto their existing or new appliances.
- Potential issues for building management.

(Note) This information is vital so that you will be able to overcome concerns and objections, or simply avoid delays in the process. It is also essential for you to have all the information you need so that you (or whomever you assign to this) will not only be comfortable with the technology, but convinced that this is the tool that will move you into the future and have a major positive impact on your fire problem and local budget. It cannot be overstressed how important it is to have a solid champion for this process before you move forward.

Step 3

Identify your Stakeholders and SWOT'S for the process.

You will need to look closely at your jurisdiction to determine who your audience will be for this step and determine where they may fall in the process in terms of support or

opposition. This audience will be internal and external. Some of these audiences will include, but not restricted to;

- The fire service and local government internally.
- Housing authorities, building managers, general public, appliance dealers, etc. Section 8 housing.
- Insurance carriers
- Market forces.

They all need to be identified and educated early in the process on the technology and the advantages. This step will work in concert to identify your prime targets, and help you identify your **Strength's**, **Weakness's**, **Opportunities**, and **Threats** or potential barriers in the process. In the process of educating and talking to your stakeholders it will help you identify where they stand so you can develop your strategies for how you will gain their support and or overcome possible issues for the next steps.

(Note) You need to be aware of the fact that along with local internal and external stakeholders market influences could come into play in your process. This will be more likely if you are a large jurisdiction or if you are planning to move beyond just local ordinance. Your local appliance distributors may get miss-information or pressure from the major appliance manufacturers or the organization (AHAM) American Home Appliances Manufacturers to try to create barriers to the Safe-T-element™ (high end heat limiting technology) or HELT, in particular.

This is why it is vital that you understand the testing and certification process that these technologies have gone through. Not unlike the homebuilders and residential sprinklers, the appliance manufacturer's issues are not based in fact, and are easily overcome through education. They are a much easier barrier to overcome for these technologies than the homebuilders for sprinklers but it is important that you understand that there is a possibility of blowback from them and be prepared for it.

Step 4

Strategies and implementation to reach the stakeholders. (Doing the actual trainings to build support for the ordinance/mandate.)

During this step you will develop and implement your plan to educate your stakeholders with an eye to gaining their support. So as part of the education it is important to customize your presentation to the audience you are approaching. The issues for the housing authorities will be much different than an elected official or an individual building manager. Some keys to this process will be:

- Identifying the right people or person in the organizations to talk to, someone with the ability to either make the decision or influence the one who can.
- Understand their organizations and the role they play in your target risk areas; their strengths and weaknesses, revenue sources, and their organizational missions and goals.
- Educate them with the focus of gaining support for the technology.
- Educate them with the goal of moving forward the ordinance or mandate.

(Note) Your ultimate goal is to prime your stakeholders to get their buy in and support for the Implementation stage for your ordinance or mandate. This may seem obvious but when you are developing your presentations for the different stakeholders you need to keep your ultimate goal in mind. Because of the fact that your goal is ultimately a mandate you need to make sure that during your trainings that you are using Safe-T-element™ as an example of the “technology” that you want to mandate. The appropriate terminology is “**High end heat limiting technology**”.

This is not a one size fits all presentation each stakeholder will have a slightly different perspective; you need to play to that. Whether they agree or disagree with a mandate the process will still effectively give them the information they need on the technology and how it benefits their particular organization. It will also identify the objections you will need to overcome when you start the formal process of adoption. You should also get a good read on where that mandate should come from. In other words are you going to go to a city ordinance, or are you going to work directly with the housing providers to mandate it within their contract.

Step 5

Implementation of the Ordinance/Mandate.

At this stage you are ready to move forward with the actual ordinance/mandate. The first decision is going to be what it is going to be. Are you going for a city ordinance or a mandate that the housing authority will enforce. Your decision should be based on some basic questions.

- **Is there the political will for ordinance within your city to do this based on;**
 1. Your relationship with the city board or decision makers?
 2. Is there a solid champion there?
 3. Are you reasonable confident you have the votes to get it passed?
 4. Is the political environment such that the taxpayers will be comfortable with a government mandate, if not, how much influence will that have on the board.
- **If the housing authority wants to mandate internally;**
 1. Are you absolutely confident they will move on it without a city ordinance?
 2. Do you have a date certain that they will enact it?
 3. Do they have the ability and internal will to enforce it?

4. How will they document and communicate to you so that you will know that it is being implemented?
5. Will they commit to the long term on the mandate with a date certain as to full compliance?

(Note) If you make the decision to go through the housing authority, there shouldn't really be a major role for you in the process. Your primary role will be monitoring the process and providing information and support where needed. You will also need to make sure the final mandate has the ability to meet 5 conditions above.

Writing and supporting the actual city ordinance

Depending on your jurisdiction you may or may not need to provide the document itself. However you should be in a position to offer a draft document they can use as a template. This will speed up the process and help minimize re-writes.

Most likely you will not only need to provide it, you will need to identify where within the city codes it needs to go. Once you have identified where the ordinance belongs the actual document itself is the easy part.

The Chief Safety Officer for Pioneering Technology Corp. Earl Diment will provide you with a draft ordinance that you can use as a template. There are also other successful ordinance documents for **“High end heat limiting technology”** that are available to help you out with this portion.

Depending on your jurisdiction the actual process may vary some but you should be prepared to provide support to the process. This support will include;

- Educating the city officials at formal council as to why this ordinance makes sense fiscally, from a green perspective, and for the safety of the residents and firefighters.
- Lobby individual lawmakers that may be on the fence to build more value and move them to a comfort zone that meets their best interests politically.
- Have a good presentation ready and be prepared to present to the entire council during the hearing portion to both to testify and or provide additional perspective and education if necessary.

Final notes

The most important thing to remember about this process is that you are not alone. My name is Earl Diment and I am the Chief Safety Officer for Pioneering Technology Corp. I spent 25 years in the fire service and have been involved in the legislative process for much of my career. I've worked on, lobbied and testified for sprinkler code adoption and smoke alarm and residential sprinkler legislation at the local, state, and national levels. I am still active on issues nationally and continue my relationship with the fire service.

I will help you in any way I can by providing all the documentation on the products, case studies of success, and lists of supporting organizations for the technology. We can also provide you with national statistics, and again, the draft documents you will need for the ordinance.

If you have any other questions or needs or want to discuss strategy please feel free to contact me. I am willing to help in any way that I can. If you think there would be value in having myself or a representative from Pioneering Technology to help with some presentations early in the process we may be able to help there too.

Although that can be a double edged sword for the process because as representatives of the product that provides this technology we could be viewed as self-serving and taint the process. This will depend largely on your stated policies, relationship and credibility with the decision makers you will be dealing with.

I would like to close with a thank you. If you are reading this document you are considering going to ordinance with this incredible technology. By doing so, if successful, you are guaranteeing a safer future for your high risk residents and first responders. You are also saving the taxpayers money and providing valuable energy savings. But maybe just as importantly you are supporting new technology that works, and encouraging a market environment that promotes innovation.

I applaud your willingness to stand with the courage of your convictions and support new proven technologies. Simply put if the fire service doesn't, then who will. Thank you again and please be in touch

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