



NFCC
National Fire
Chiefs Council

The professional voice of the
UK Fire & Rescue Service

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Dear SAD group members,

The NFCC will continue to promote the use of sealed battery units to the public; however I would like to gain a consensus from the Smoke Alarm Devices group, on a voluntary solution to promote the discontinuation of removable battery (Battery only) smoke alarms from manufacturers product ranges, specifically ionisation but potentially for all smoke alarms.

The NFCC Home Safety Committee recently completed a review of the use of ionisation smoke alarms. The purpose was to identify the next steps the NFCC should take nationally around the use of ionisation smoke alarms in homes, and whether the NFCC should support a legislative answer to the potential issues of ionisation smoke alarms. The concerns around the use of ionisation alarms are not new;

(1) The National Institute for Standards and Technology (NIST) has found that, on average, an optical detector is 30 minutes faster in detecting a smouldering fire than an ionisation detector. The highest percentage of deaths caused by smouldering fires occurs while people are sleeping, when the operation of a smoke detector is critical.

(2) 'Several studies show that the ionisation smoke detector is many times more likely to be disabled than photoelectric detectors' - (Letter from Senator John Kerry 2006). Thus, leaving many homes unprotected. On this issue alone, one would favour the fitting of optical detectors over ionisation detectors.

Based on the 39 responses from fire & rescue services to the [recent 'Detection Data Summary'](#), NFCC identified services are using only optical or multi sensor smoke alarms.

As NFCC Home Detection Lead, I felt it was important to gather a wider view of stakeholders rather than just a fire service perspective. The initial challenge was to see if there was justification to lobby for the removal of ionisation smoke alarms through legislation.

The Environment Agency (EA) state that ionisation alarms are controlled and the risk to the environment is low due to the small quantity of any radioactive material being present.

BEIS (Department for Business Energy & Industrial Strategy), suggest that the justification threshold has not been met to legislate ionisation alarms out of circulation. They also comment that any health concerns from these alarms is pretty much non-existent.

There is little evidence gained in our research which would suggest legislation is the way forward. This feedback from the EA and BEIS suggests there is no big push from the key external partners to lobby for legislation or the removal of ionisation smoke alarms.

There is evidence to suggest there is a place for ionisation alarms to identify fast flaming fires. However, there is also evidence to show that the newer advancements in technology with multi sensor optical smoke alarms with a heat element can cater for fast flaming fires.

There is also a desire by manufacturers to reduce the production of ionisation alarms. Some alarm manufacturers / suppliers either have stopped producing ionisation alarms or do not have them in their new product releases, which suggests the problem will resolve itself over a period of time.

There does remain a market for low cost ionisation smoke alarms within the retail and trade sector. Because ionisation alarms are lower cost they are popular. It can be argued that if occupiers opt for these lower cost alarms at least they will be protected, any detection is better than no detection.

If we accept that legislation is not the solution because the sale of ionisation smoke alarms will eventually reduce over time as product development focusses on new technology but the ownership of a smoke alarm is better than none, then what are we trying to resolve?

There is evidence, (*BRE Briefing paper: 'the performance of multi-sensors in fire and false alarm tests'*), to suggest ionisation alarms could cause a higher percentage of false alarms.

Here lies the potential for occupiers to remove the battery from non sealed battery; if these are the lower cost battery only alarms then obviously this is a concern. I feel this is the focus where we should put our efforts, to discontinue the production of non sealed batteries in ionisation smoke alarms (battery powered only).

'An estimated 20% of U.S. homes have smoke alarms present but none that are working. Nearly all of this 20% involves dead or missing batteries, as opposed to problems with AC power. Nearly half of the households with non-operational smoke alarms that gave a reason cited nuisance alarms or continuous alarming as the reason for disabling the smoke alarm'. (Public/Private Fire Safety Council 2006)

I would like to understand if a voluntary push / support from the industry is a potential or if not what does the group deem a viable solution to move this forward, such as standards or legislation.

Yours sincerely



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