

**LOG OF MEETING**  
**OFFICE OF HAZARD IDENTIFICATION AND REDUCTION**

SUBJECT: Meeting with National Electrical Manufacturers Association (NEMA)  
Arc-Fault Circuit Interrupter (AFCI) Manufacturers

DATE OF MEETING: July 23, 2019

PLACE OF MEETING: National Product Testing and Evaluation Center (NPTEC),  
U.S. Consumer Product Safety Commission, Rockville,  
MD

LOG ENTRY SOURCE: Douglas Lee, EXHR

COMMISSION ATTENDEES: Douglas Lee, EXHR  
Prem Chandrasekhar, EXHR  
Andrew Trotta, ESEF  
Simon Lee, ESEF

NON-COMMISSION ATTENDEES:







Cecil Rivers, ABB, Inc.  
William Miller, Hubbell  
David Hewitt, Siemens  
Jed Mouda, AHAM  
Steve Campolo, Leviton  
William Grande, Leviton  
Muhammad Ali, NEMA  
Zijun Tong, NEMA  
Keith Waters, Schneider Electric  
Ashley Bryant, Siemens  
Frederick Reyes, UL  
Steve Rood, Legrand

SUMMARY OF MEETING:

CPSC staff provided an overview of CPSC and some of the work at their NPTEC facility. CPSC staff briefly discussed their role in support of voluntary standards for AFCIs and the National Electrical Code requirements for adopting AFCI technology to mitigate fire hazards in homes.

Ms. Bryant gave a presentation of the NEMA AFCI Circuit Breaker Compatibility Task Force. This work included identifying and addressing of consumer reported unwanted tripping issues with specific brand AFCI circuit breakers and specific appliances under Non-Disclosure Agreements (NDAs). The task force has been working with the Association of Home Appliance Manufacturers and Underwriters Laboratories (UL) to

resolve unwanted tripping issues, improve safety and performance of AFCIs and to educate stakeholders (e.g., consumers, electricians/installers and *NEC* panel members). The NEMA AFCI Circuit Breakers Compatibility Task Force presentation is provided below.

 <p><b>NEMA AFCI Circuit Breakers Compatibility Task Force</b></p> <p><b>NEMA STAFF LEAD:</b> Muhammad Ali, Program Manager  <b>PRESIDING OFFICER (s):</b>          Ashley Bryant, Siemens          Keith Waters, Schneider Electric</p>	 <p><b>Task Force Scope</b></p> <p>The scope of AFCI Circuit Breakers Compatibility Task Force is to investigate and implement means to reduce AFCI circuit breaker compatibility problems resulting from home electrical products and other sources.</p> <p>The Task Force is dedicated to:</p> <ul style="list-style-type: none"> <li>Working together with AHAM on resolving unwanted tripping issues</li> <li>Reviewing incident reporting related to unwanted tripping</li> <li>Creating helpful documentation for AHAM members to assist them in resolving issues related to unwanted tripping</li> <li>Working with UL to find any potential areas of improvement in safety and performance standards</li> </ul> <p>The goal of the Task Force is: a) Education b) Collaboration c) Performance while maintaining safety</p>
 <p><b>Accomplishments</b></p> <ul style="list-style-type: none"> <li>Interface with companies with established NDAs has proven to be helpful as without the NDAs, companies were not able to discuss the unwanted issues in detail.</li> <li>Periodic review of unwanted tripping incident reports from both NEMA and AHAM to find most common issues and determine if a resolution could be achieved. The number of incidents in USA have been significantly reduced in 2018-2019 as compared to years prior to that.</li> <li>Created helpful documents such as, Common Causes of AFCI Circuit breaker tripping, Technical support contacts and a Date Code Document to assist AHAM Members in resolving issues.</li> </ul>	 <p><b>Current Activities</b></p> <ul style="list-style-type: none"> <li>Field Issue Management</li> <li>Improving the Incident Reporting Process</li> <li>Working on some sort of messaging out to consumers that Home Appliance manufacturers and Circuit Breaker manufacturers are working together on this issue.</li> <li>Key Learnings from manufacturers with NDAs</li> </ul>
 <p><b>Other Technical Activities</b></p> <ul style="list-style-type: none"> <li>Reviewing the following NEMA Publications:             <ul style="list-style-type: none"> <li>NEMA ABP-2: <i>Recommendations on AFCI / Home Electrical Product Compatibility</i> <ul style="list-style-type: none"> <li>Offers guidelines to designers of home electrical products for increasing compatibility with arc-fault circuit interrupters (AFCIs). Identifies conditions to help minimize the risk of undesired AFCI operation.</li> </ul> </li> <li>NEMA ABP-6: <i>What is the Purpose of a Molded Case Circuit Breaker?</i> <ul style="list-style-type: none"> <li>Discusses how molded case circuit breakers provide protection for conductors, and under what conditions they provide this protection.</li> </ul> </li> </ul> </li> </ul>	 <p><b>NEMA AFCI Circuit Breaker Manufacturers</b></p> <ul style="list-style-type: none"> <li>ABB Inc.</li> <li>Carling Technologies, Inc.</li> <li>Eaton</li> <li>Leviton Manufacturing Co., Inc.</li> <li>Schneider Electric</li> <li>Siemens Industry, Inc.</li> </ul>