

# ANSI/UL 2201 mitigates carbon monoxide (CO) poisoning for portable generators

The prevalence of natural disasters puts the spotlight on portable generator usage and safety.

**Portable generators are useful when temporary or remote electric power is needed, but they also can be hazardous.**

## Certification to UL 2201 can help mitigate hazards

Every year, people die in incidents related to portable generator use. Most of the incidents associated with portable generators reported to the U.S. Consumer Product Safety Commission (CPSC) involve carbon monoxide (CO) poisoning from generators used indoors or in partially-enclosed spaces.

The latest CPSC report concerning non-fire CO associated incidents and deaths, published in August 2017, states from 2005-2016 a total of 780 of 965 (>80 percent) non-fire CO deaths were caused by portable generators – an average of 71 deaths per year.

**780 OUT OF 965**

NON-FIRE CO DEATHS WERE  
CAUSED BY PORTABLE GENERATORS  
FROM 2005-2016



## Government & industry requested UL expertise

The CPSC, consumer safety advocates and manufacturers requested that UL form a working group to develop a specific proposal for requirements for portable engine-generator sets covered in the scope of ANSI/UL 2201 with the goal of having requirements that reduce the risk of death and injury due to CO poisoning.

A task group of 37 members was formed, including generator and engine manufacturers, trade associations, academia, government (state and federal), labor and the local response (fire department) communities.



## Consensus of ANSI/UL 2201 2nd Edition

On January 3, 2018, consensus was achieved on the 2nd edition of ANSI/UL 2201 – the American National Standards Institute accredited national standard for Carbon Monoxide (CO) Emission Rate of Portable Generators. Driven by the work of the Task Group and by specific comments provided by the Standards Technical Panel (STP) and other stakeholders, ANSI/UL 2201 received the affirmative votes necessary from the STP participating in the standard's development to make ANSI/UL 2201 the first U.S. consensus standard for addressing carbon monoxide emissions from portable generators. CPSC technical staff, Consumer Federation of America, National Consumers League and other safety organizations have all given their support for ANSI/UL 2201 as well.



## ANSI/UL 2201 provides two critical forms of protection from CO poisoning

### UL's public safety mission

As always, UL's public safety mission is at the forefront of everything we do. We help provide peace of mind to consumers, retailers and manufacturers by leveraging our safety science expertise to develop standards and to test and certify the products that people use every day.

### ANSI/UL 2201 comprehensive two-tier strategy

ANSI/UL 2201 addresses performance requirements to mitigate CO poisoning and contains a comprehensive, carefully developed two-tier strategy:

**1. The first safeguard calls for a reduction in CO emissions.** The method by which a manufacturer achieves this is not prescriptive, to allow the use of widely available and proven technologies already in the marketplace, such as electronic fuel injection (EFI), an onboard electronic engine management system, that can greatly reduce CO emissions from the engine. By significantly reducing the amount of CO a portable generator emits, the likelihood of CO poisoning and death is also reduced.

**2. The second safeguard, shutoff technology, provides additional protection** when a generator is misused in an enclosed space, such as a closed garage or basement. ANSI/UL 2201 requires protection from the buildup of CO, which can be addressed by using the appropriate sensors and incorporating shutoff technology into the product. Because field history indicates that portable generators are used, and misused, in widely variable conditions, both safeguards are important steps to help improve portable generator safety.

### Expertise in generator testing and certification

UL works to help ensure the safe manufacture and use of improved technologies through rigorous assessments on portable generators. ANSI/UL 2201 offers testing for CO under a variety of conditions to verify additional protection for consumers. UL has now begun offering testing and certification to ANSI/UL 2201 with multiple portable generators having already successfully completed their UL certification and many more are expected in the near future.

## ANSI/UL 2201 TWO-TIER STRATEGY



ADDRESSES PERFORMANCE REQUIREMENTS TO **MITIGATE CO POISONING**, HAS **SHUTOFF TECHNOLOGY** FOR ADDITIONAL PROTECTION

## Look for the UL mark on product packaging or on the product itself

UL strives to make identifying a UL Certified product as easy as possible. Simply look for the UL Mark for low carbon monoxide portable generators on the front of the packaging and the UL holographic certification label with the Enhanced Mark on the bottom of the product. These labels are your indication that you have a genuine UL Certified product.



For more information, email: [EnergyTechQuote@ul.com](mailto:EnergyTechQuote@ul.com), call 1-877-UL-HELPS (847.272.8800), or visit [UL.com/PortableGenerators](http://UL.com/PortableGenerators)



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