

# TechBriefs

## Savannah River National Laboratory

U.S. DEPARTMENT OF ENERGY • SAVANNAH RIVER SITE • AIKEN • SC

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### At a glance

- > Remotely operated
- > Simple to operate
- > Rapid deployment
- > Inexpensive to construct
- > Operation is non-reversible
- > Compatible with nearly all electrical disconnects
- > U.S. Patent 9,530,576 B2

### Contact Information

#### Partnering Opportunities

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## Remote Electrical Throw Device

Engineers at the Savannah River National Laboratory (SRNL) have designed a new device for disconnecting electrical power. It allows the operator to perform the disconnect from a safe distance with reduced personal protection equipment (PPE), reducing potential injury in the event of an arc flash event.

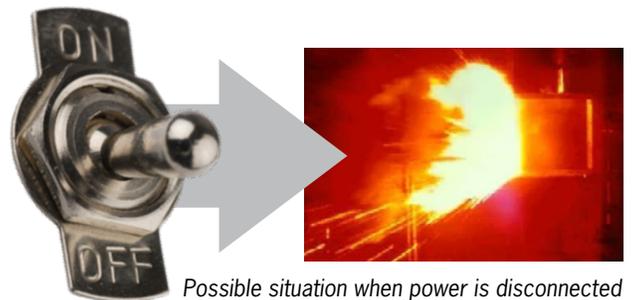
### Background

Electrical disconnects are commonly used in industrial settings on many hardwired or high powered machinery or equipment as a means of locally disconnecting power. These are industrial versions of a typical light switch

and often contain fuses. Operation of these switches create an arc flash explosion hazard when thrown on or off, due to mechanical failure, electrical fault, or other causes. This requires an operator to wear expensive arc flash personal protective equipment to throw the switch.

### How it works

This device adds significant distance for the operator and can be operated around a corner, behind a shield, etc. The device is mechanically activated, with no stored energy in the device, the actuation cable can be non-conductive, and operation is non-reversible (switch cannot be accidentally turned back on/off remotely in a single operation. This equipment is simple, portable, lightweight, easy to operate and compatible with nearly all electronic disconnects. It takes a only a few seconds to set up and connect or disconnect the power.



*Possible situation when power is disconnected*



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### Technology transfer

The Savannah River National Laboratory (SRNL) is the U.S. Department of Energy's (DOE) applied research and development laboratory at the Savannah River Site (SRS).

With its wide spectrum and expertise in areas such as homeland security, hydrogen technology, materials, sensors, and environmental science, SRNL's cutting edge technology delivers high dividends to its customers.

The management and operating contractor for SRS and SRNL is Savannah River Nuclear Solutions, LLC. SRNS is responsible for transferring its technologies to the private sector so that these technologies may have the collateral benefit of enhancing U.S. economic competitiveness.

### Stage of development

This technology is in early stage research and development phase. A second generation prototype is under development. A patent has been filed with the U. S. Patent and Trademark Office.

### Partnering opportunities

SRNS invites interested companies with proven capabilities in this area of expertise to develop commercial applications for this process under a cooperative research and development agreement (CRADA) or licensing agreement. Interested companies will be requested to submit a business plan setting forth company qualifications, strategies, activities, and milestones for commercializing this invention. Qualifications should include past experience at bringing similar products to market, reasonable schedule for product launch, sufficient manufacturing capacity, established distribution networks, and evidence of sufficient financial resources for product development and launch.

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