



**FIRE +  
RESCUE**

# **PARTNER WITH US FOR A SAFER FUTURE**

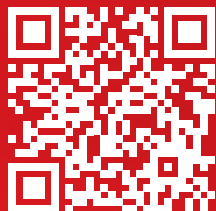
**Safety of Alternative and Renewable  
Energy Technologies (SARET)  
Research Program**

**2023**



## WATCH

We introduce our Fire Investigation and Research Unit.



# BECOME A SARET SPONSOR

FRNSW is seeking SARET sponsors, partners, and affiliates to assist with this important research that will enhance the safety of the public and emergency responders as sustainable energy technology continues to grow.

# INTRODUCTION AND PURPOSE

Fire and Rescue NSW (FRNSW) is leading a collaborative research program on the Safety of Alternative and Renewable Energy Technologies (SARET).

Energy storage in the form of lithium-ion batteries has become increasingly common in a wide range of applications across consumer, residential, commercial and transport sectors. This includes chargers and powerpacks, e-bikes and e-scooters, power tools, and mobile devices.

With higher usage comes greater risk, with a noticeable increase in reported battery-related fires and casualties worldwide.

FRNSW is partnering with fire services, government agencies, research institutions and industry from around the world, to lead a suite of research and testing projects looking at the risks and hazards associated with lithium-ion batteries and other alternative energy technologies.

This includes:

### **Project 1. Fire service response to lithium-ion battery fires**

Project 1 assesses the effectiveness of new and existing agents, products and delivery systems for use in fires involving Lithium-ion cells, batteries and battery systems in comparison with water.

### **Project 2. End-of-life lithium-ion battery hazard management**

Project 2 informs the management of hazards related to battery recycling, and the handling, storage and transportation of damaged and fire-affected lithium-ion batteries and battery systems to minimise the risks of exposure and secondary ignitions to first and second responders.

### **Project 3. Electric vehicle fires in structures**

Project 3 investigates the unique challenges of electric vehicle fires in parking garages and car parks, with aims to quantify the differences between battery-electric vehicles and conventional vehicles with respect to fire severity and propagation, building performance, detection and suppression requirements, air handling and ventilation, access, and charging effects.

### **Project 4. Fire propagation in battery energy storage systems.**

Project 4 aims to provide a better understanding of the fire propagation behaviours of various battery energy storage systems to inform guidance on separation, detection and protection requirements for new installations, from residential size to commercial and grid scale applications.



PREVENTION + EDUCATION



FIRE



RESCUE



HAZMAT



PROTECT THE ENVIRONMENT



COUNTER TERRORISM



NATURAL DISASTER + HUMANITARIAN RELIEF



MEDICAL RESPONSE

# SARET MEMBERSHIPS

		<b>SARET AFFILIATE</b>	<b>SARET RESEARCH PARTNER</b>	<b>SARET INDUSTRY PARTNER</b>	<b>SARET SPONSOR</b>
<b>ELIGIBILITY</b>					
Type of business or organisation		Any registered business or organisation	Academic / Research Institutions / Researchers	Any registered business or organisation	Any registered business or organisation
<b>Requirements</b>	Partnership Assessment	✓	✓	✓	✓
	Non-Disclosure Agreement	✓	x	x	x
	Collaborative Agreement	x	✓	✓	✓
Minimum contribution		In-kind only	\$10k	\$20k or products to value of \$20k+	\$100k or products to value of \$100k+
<b>BENEFITS</b>					
Technical Working Group Membership		✓	✓	✓	✓
<b>Acknowledgements</b>	FRNSW Website listing	✓	x	x	x
	FRNSW Website listing with linked logo	x	✓	✓	✓
	Joint logo lock-up	x	x	x	✓
	SARET Publications	x	✓	✓	✓
	FRNSW Head Office and/ or Emergency Service Academy	x	x	x	✓
Authorship on publications (subject to Authorship Agreement)		✓	✓	✓	✓
Collaboration Hub member access		✓	✓	✓	✓
Invitation to view tests on site		x	✓	✓	✓
Unpublished data access		x	✓	x	✓

# SARET SPONSORS

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Organisations that are making significant contributions to the SARET program are invited to be recognised as a SARET Sponsor.

Sponsors of the SARET program will have contributed a sum of at least AUD\$100,000 in funding, a donation of test products to the value of AUD\$100,000 or more, or a combination of the two.

SARET Sponsors have access to the following benefits:

- Participation in the Technical Working Groups (TWGs) of their choice
- Invitations to view testing on site
- Prominent acknowledgment on the SARET public-facing webpage and collaboration hub - including a linked large-format logo (150px height), and 200-word descriptor
- A joint digital logo lockup for use (with approval)
- Acknowledgement displayed on SARET promotion at the FRNSW Head Office and/or Emergency Services Academy.
- Acknowledgement in select publications associated with the SARET program
- Eligibility for authorship on SARET publications (subject to contributions to the output and the Authorship Agreement)
- Member access to the SARET collaboration hub
- Read access to unpublished (raw) data and footage.



# SARET INDUSTRY PARTNERS

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Organisations can become Industry Partners of the SARET program for a minimum donation of AUD\$20,000 in funding, a donation of products to the value of AUD\$20,000 or more, or a combination of the two.

SARET Industry Partners have access to the following benefits:

- Participation in the Technical Working Groups (TWGs) of their choice
- Invitations to view testing on site
- Acknowledgment on the SARET public-facing webpage and collaboration hub - including linked logo (75px height)  
Acknowledgement in relevant publications associated with the SARET program
- Eligibility for authorship on SARET publications (subject to contributions to the output and the Authorship Agreement)
- Member access to the SARET collaboration hub



# SARET RESEARCH PARTNERS

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Researchers can become Research Partners\* on the SARET program for a minimum donation of AUD\$10,000 or by invitation.

SARET Research Partners have access to the following benefits:

- Participation in the Technical Working Groups (TWGs) of their choice
- Invitations to view testing on site
- Prominent acknowledgment on the SARET public-facing webpage and collaboration hub – including linked logo (75px height)
- Acknowledgement in select publications associated with the SARET program
- Eligibility for authorship on SARET publications (subject to contributions to the output and the Authorship Agreement)
- Member access to the SARET collaboration hub
- Read access to unpublished (raw) data and footage.

# SARET AFFILIATES

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Participants who are unable to make a significant financial contribution to the SARET Program can participate as SARET Affiliates.

SARET Affiliates have access to the following benefits:

- Participation in the Technical Working Groups (TWGs) of their choice
- Acknowledgment on the SARET public-facing webpage and collaboration hub – name listing only
- Acknowledgement in select publications associated with the SARET program
- Eligibility for authorship on SARET publications (subject to contributions to the output and the Authorship Agreement)
- Limited Member access to the SARET collaboration hub

\* Eligibility criteria apply

## HOW TO APPLY

Contact the FRNSW Research Team at:  
[research@fire.nsw.gov.au](mailto:research@fire.nsw.gov.au).

Visit [fire.nsw.gov.au/saret](http://fire.nsw.gov.au/saret)  
for more information.



**FIRE +  
RESCUE**

**PREPARED FOR ANYTHING**

[www.fire.nsw.gov.au](http://www.fire.nsw.gov.au)