



SOLAR AND FIRE EDUCATION

Firefighter Survey

Summary

The statement that “100% of firefighters surveyed recommend microinverters” is based on a small, non-scientific, voluntary survey of 84 firefighters who completed SAFE training sessions led by retired Captain Richard Birt, a paid consultant for Enphase Energy. The findings are directional in nature and should be interpreted within the methodology, limitations, and disclosures provided in this document.

Methodology, Disclosures, and Context

The Solar and Fire Education (SAFE) program was founded by retired Captain Richard Birt. The SAFE program is dedicated to helping firefighters operate more confidently and safely around energized solar structures. Through hands-on instruction, real incident examples, and direct engagement with the fire service, SAFE provides practical skills that firefighters can apply immediately on scene.

As part of this mission, SAFE conducted a brief post-training survey of 84 firefighters to better understand how firefighters who completed the 2025 training viewed different solar inverter architectures from a safety perspective.



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Overview of the Survey

Purpose

The survey was designed to gather the opinions of firefighters who had just completed SAFE training on the relative safety of string inverters versus microinverters in residential and commercial settings.

Population and Sample Size

As of December 2025, the results reflect responses from **84 firefighters**, engineers, captains, training officers, and chiefs, across multiple departments in several states.

Survey Administration

- **Format:** Questionnaire consisting of five questions, completed through a short web form.
- **Timing:** Administered immediately after completing a SAFE training session.
- **Eligibility:** Any firefighter who attended a SAFE class and chose to voluntarily respond.
- **Question Framing:** Respondents received a plain-language description of string inverter and microinverter architectures and were asked which they considered safer for homes and businesses.

Relationship Disclosure

- SAFE training sessions were conducted by retired Fire Captain **Richard Birt**
- Captain Birt is a **paid consultant to Enphase Energy**, the manufacturer of microinverter-based solar systems
- SAFE and Enphase collaborate to support firefighter education on solar safety
- Firefighters were not compensated for participating in the survey



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Important Limitations and Disclosures

This survey offers directional insight from a limited population of trained firefighters. It is **not** a scientific, statistically representative study of all firefighters nationwide.

Non-Scientific Survey

- The survey was not designed as a scientific study
- No control group or random sampling was used
- No independent research firm conducted or validated the results
- Responses should be considered **anecdotal and illustrative**, not conclusive

Limited and Non-Random Sample

- Respondents came from a **self-selected group** of firefighters who attended SAFE trainings
- Participation in the survey was voluntary
- Department types, geographies, and ranks are varied but **not representative** of the entire fire service
- Results may reflect selection bias from those who chose to take the survey after training

Influence of Training Content

- All respondents completed a SAFE training session led by retired Fire Captain Richard Birt shortly before taking the survey
- SAFE training includes instruction on solar system architecture and how different systems behave during emergencies
- Exposure to this content may have influenced respondents' perceptions and answers

Because of these factors, the survey findings should not be interpreted as representing all firefighters or as independent scientific proof of microinverter safety.



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Context on SAFE, Captain Birt, and Microinverter Safety

Retired Fire Captain **Richard Birt** has decades of experience responding to structure fires and emergency incidents involving energized equipment. His SAFE curriculum is grounded in real-world fireground operations and the need for firefighters to quickly assess hazards, make entry, ventilate structures, and protect both crews and civilians.

In SAFE training, firefighters learn how different solar system architectures behave during a fire or emergency. Traditional string inverter systems route high-voltage DC from the array across the roof to a centralized inverter, while microinverter systems convert DC to AC behind each module. By eliminating high-voltage DC from the array wiring, microinverter-based systems can simplify shutdown procedures and reduce the number of unknowns firefighters face during energized operations.

The survey results reinforce what many firefighters express during training: once they understand the architectural differences, microinverters are often viewed as the safer design for rooftop operations. These insights are encouraging and align with the safety principles promoted through SAFE, while remaining subject to the limitations described above.