

Safety, Quality, Reliability, and Standards Committee

Standards to Dive Into

IEEE 2030.5 (Microgrids) IEEE P3434 (Grid-Connected Storage) IEEE 1547 (DER Connectivity)

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The purpose of this committee is to promote discussions and disseminate information around safety, reliability, quality, and standards as they apply to ISVx projects, and more broadly to the communities in which they operate. These issues are often overlooked during planning, resulting in adverse consequences in terms of cost and durability over the duration of the project.

Why safety? Electrical accidents are relatively rare, compared to other types of accidents, but are proportionally more deadly. Introducing electricity, or developing electricity in a specific region, is a wonderful thing, transforming lives for the better. This is also a great opportunity to raise awareness around safety issues, and share some simple precautions to take around electricity, as well as around any machinery.

Why reliability? Poor quality equipment can doom the best thought-out and executed project. Early failure will lead to disappointment among customers, necessitate unscheduled and possibly costly repairs, and distract a project from an otherwise great growth trajectory. Thinking through quality issues early on and assuring products meet specifications can go a long way in ensuring success.

Why quality? Quality ensures reliability and safety, and as such is an important component of project development and implementation. It is important to ensure good quality in design basis notes, engineering drawings, construction methodology, purchase-order terms and conditions, contract conditions including good definition of deliverables, guaranteed performance parameters, warranties offered, etc.

Why standards? ISVx operates in parts of the world where standards are sometimes not well established, and if they are, not well enforced. As a result, imported equipment is designed on varying standards. Furthermore, the standards may not be well adapted to a location for which they were not developed. While standard development per se is beyond the reach of ISVx projects, awareness of their importance and help with developing them where possible is critical.

These three topics are interrelated: Poor quality equipment may fail, resulting in possible short circuits and safety issues. All of them can result in wasted efforts or worse. This committee's role is to gather information around these topics; raise awareness among entrepreneurs, their customers, and society at large. Ultimately, information better tailored to the Smart Village audience will be developed by this committee. The group is also working hand in hand with academics and where appropriate government and standard bodies to foster the education of engineers well versed in these topics, and capable of developing proper resources for their countries.

The committee is relatively new and looking for volunteers. We have teams for Africa, Latin America, South Asia and China dedicated to this topic in their respective regions, all looking to grow this activity with motivated volunteers.

For further information, contact Bruno Lequesne, SRS Committee vice-chair:
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Resources:

Presentation on ISVx SRS Committee, July 2021, by Bruno Lequesne, ISVx vice-chair Electricity Safety handbook, Central Electricity Authority of India. Movie on safety for rural India (available in Tegulu, English, French, Arabic, Spanish and Portuguese):

<https://ieeetv.ieee.org/ieeetv-specials/awareness-and-prevention-of-electrical-accidents>

Example of poor quality, failing equipment and the danger it represents (Photo credit: C. Satish)

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