

SUCCESS CASE 31.2024

VOLTECTOR®

THE INVISIBLE VOLTAGE
PROTECTOR

THE CHALLENGE

In the past, **dangerous accidents** have occurred within the **buildings of primary substations**. Due to many similar-looking doors, it occasionally happens that an incorrect medium voltage (MV) switchgear cubicle is opened. Normally, this is noticed at the latest when the third of the five electrical safety rules (*verify the absence of voltage*) is followed correctly. The aim of this application is to **prevent accidents** caused by unfortunate circumstances that result in the electrical safety rules being applied incorrectly.



THE IDEA AND SOLUTION

The Voltector uses various sensor-based measuring principles to **detect electrical hazards** and warns of unintentional proximity to active parts in the MV switchgear cubicle. When opening the MV switchgear cubicle, the Voltector emits a warning sound if there are still active/energised system parts inside to alert the operators of life-threatening situations.

The Voltector is an assistance system and does not represent a substitute for safety instructions specified by regulations, which must be adhered to at all times. The Voltector is intended to help **prevent human** error caused by routines when working in the vicinity of potentially live parts at medium voltage.

For this purpose, Westnetz GmbH and Peek GmbH have developed a device for retrofitting old substations, that is convenient, easy to install, battery-powered and does not require any external sensors.



KEY SUCCESS FACTORS

- **Functional.** When opening the door of a cubicle with energised parts, the Voltector emits an acoustic warning that cannot be unheard.
- **Easy to install.** The tool-free installation of the Voltector only requires a couple of minutes.
- **Battery powered.** The battery life of the Voltector is approximately ten years.
- **Accepted.** Technicians have shown high acceptance of the system as it does not impact or disturb their daily work.

WAY FORWARD

The rollout of the Voltector on Westnetz substations started in August 2024. Other DSOs that are part of the E.ON group will follow.