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## Flexible spare transformer: an engineering challenge

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Energy, a multifaceted concept, plays a pivotal role in economic growth and has a dominant position in everyday affairs. Therefore, in case of possible high-impact low-frequency (HILF) events, including natural disasters, intentional malicious act or non-intentional accidents, continuity or quick restoration of power supply is paramount.

Often utilities maintain a stock of spare transformers for specific substations; however deployment of these dedicated spare transformers gets restricted due to divergent electrical parameters and physical layout limitation across the network.

Flexible Spare Transformers (FST's) designed to accommodate for different voltages, vector groups, terminations and varying layout, can successfully address such challenges. Designing and manufacturing such FST's is an engineering challenge and requires a collaborative approach from all stakeholders. This paper presents 4 case studies of such FST's along with associated engineering challenges and solutions.

*Keywords:* HILF, Flexible Spare Transformer (FST)

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