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# What's behind South Korea's battery fire accidents?

A series of fires that occurred between 2017 and 2019 brought South Korea's energy storage market to a standstill. New research seeks now to shed light on all the causes of the accidents and analyzes several social factors that may have led to the continuous occurrence of the accidents.

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The aftermath of a fire at a battery installation in South Korea's Chungcheongbuk province. A string of fires has brought the nation's energy storage market to a standstill.

*Image: North Chungcheong Province Fire Service Headquarters*

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A series of 28 consecutive battery fires that occurred in South Korea between 2017 and 2019 led the nation's energy storage market to complete paralysis.

The country's Ministry of Trade, Industry and Energy (MOTIE) reached a handful of broad conclusions in its investigative report into the accidents. By taking systems apart and examining components, it identified a number of potential manufacturing defects and determined that some systems likely lacked sufficient protection against electric shock. It also used moisture, dust, and salt mist tests to identify weaknesses in the environmental oversight of battery systems.

In addition, MOTIE highlighted the issue of poor installation practices and noted problems that potentially arise when installers combine energy management and control system components from different manufacturers – even when such parts are not designed to be used as elements of an integrated system.

These causes, however, may not be all the reasons behind the accidents, according to new research from South Korea's Ulsan National Institute of Science and Technology (UNIST). "Our study considers the impact and risks associated with social factors related to the battery fires, which has rarely been considered in previous studies," the research's lead author, [redacted], told **pv magazine**. "Although the risk of fire has been mitigated by the development of battery storage technology, there are still potential risks such as human error and normal accidents that can be caused by the people, organizations, and social context in which the technology is utilized."

According to [redacted], the fires in Korea were socially constructed by factors related to environments such as strong incentives, inadequate regulation, the different cultural backgrounds of the stakeholders, the tight coupling of various sub-technologies and miscommunication, the systematic pressure on profit-seeking, and a false sense of security.