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## Resources for the Energy Industry

# Battery Energy Storage System (BESS) Technology Growth and Risks



By Travelers

⌚ 4 minutes

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Renewable energy sources, such as solar and wind, are projected to generate 44% of all power in the U.S. by 2050,<sup>1</sup> which is increasing demand for the battery energy storage systems (BESS) needed to store this energy.

Unprecedented public investment in clean energy – afforded mainly by the Infrastructure Investment and Jobs Act, or IIJA (2021), the Inflation Reduction Act (2022) and the CHIPS Act (2022) – is fueling much of this growth. Market stakeholders include entities involved in the manufacturing, sales, installation, maintenance and operation of BESS facilities.

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One unique BESS hazard is battery fire and/or explosion caused by thermal runaway, or the rapid uncontrolled release of energy from a battery cell. Thermal runaway can be caused by an internal short circuit, which can be caused by mechanical, thermal or electrical damage to the battery before, during or after installation.

### 3. Environmental pollution and health hazards

Some chemicals used to make batteries may be hazardous. Even when the best safe handling practices are followed, accidents can happen – and any damage caused during the manufacturing, transportation or disposal process can expose people working or living in or near a BESS facility to harmful gases or pollute the surrounding soil and groundwater.

Thermal runaways require a significant amount of water to cool and control. Potentially hazardous chemicals released during the fire can pollute the water used to fight it, contaminating any soil or groundwater absorbing the runoff.<sup>5</sup> Fumes released can also be a risk to the public and first responders.

## Effective BESS risk management

Managing BESS-related risk depends on planning, preparation and having a trusted, experienced partner. With a dedicated team of energy experts and Claim specialists, Travelers has been providing [specialized coverage and risk control solutions](#) to support owners and operators in the rapidly growing renewables industry for over 30 years.

To learn more, visit [Travelers Insurance for the Renewable Energy Industry](#) or contact your agent today.

#### Sources:

<sup>1</sup> EIA projects that renewable generation will supply 44% of U.S. electricity by 2050, U.S. Energy Information Administration, March 18, 2022. –

<https://www.eia.gov/todayinenergy/detail.php?id=51698> 

<sup>2</sup> Bloomberg New Energy Finance (BNEF), 2019 Long-Term Energy Storage Outlook, Bloomberg NEF, New York, 2019 – as cited in Energy Storage Grand