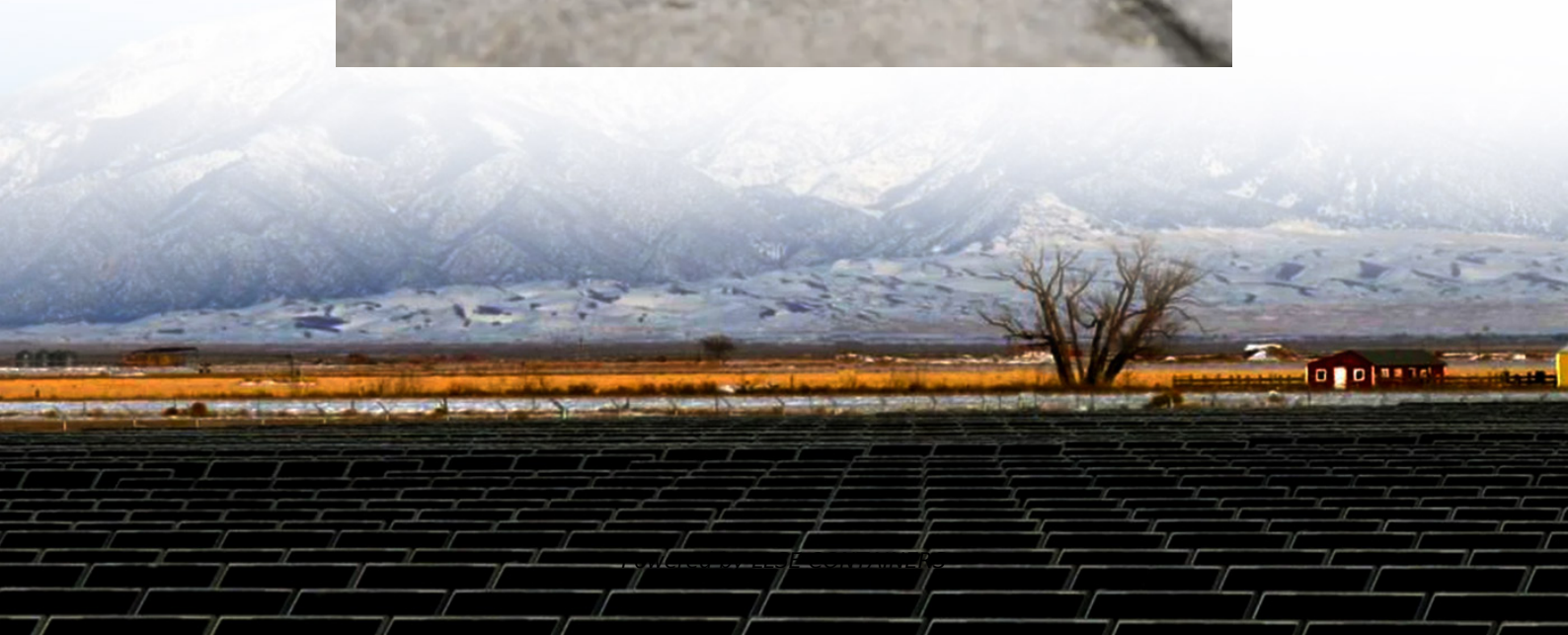


# Temperature when solar panels are generating electricity





## Overview

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Do solar panels produce electricity if it's Hot?

High temperatures can cause a decrease in panel efficiency due to the temperature coefficient. However, it's worth noting that solar panels still produce electricity even on hot days. They are designed to dissipate excess heat to maintain optimal operating temperatures.

Do solar panels need heat?

Photovoltaic solar systems convert direct sunlight into electricity. Therefore, these panels don't need heat; they need photons (light particles). 'The optimal operating temperature for a solar panel is below 25 °C.' When temperatures rise, so does the temperature of the cells, which can reduce their electrical output.

How hot do solar panels get?

Manufacturers rate solar panels under Standard Test Conditions (STC), which include: In real-world conditions, solar panels typically operate 20-40°C above ambient air temperature, meaning a 30°C (86°F) day can result in panel temperatures reaching 50-70°C (122-158°F).

How does temperature affect solar power output?

The chart's downward slope indicates how solar panel power output decreases as temperature rises. Most charts show a baseline temperature of 25°C (77°F), which represents standard test conditions. For every degree above this baseline, efficiency typically drops by 0.3% to 0.5%, depending on the panel type.



## Temperature when solar panels are generating electricity



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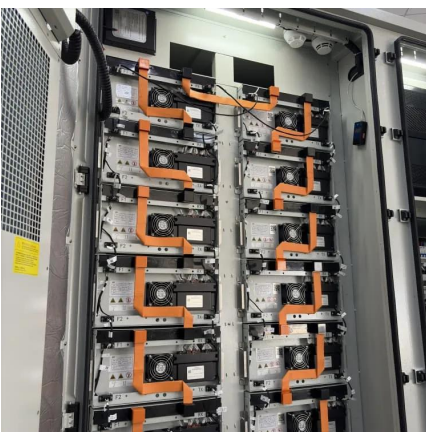
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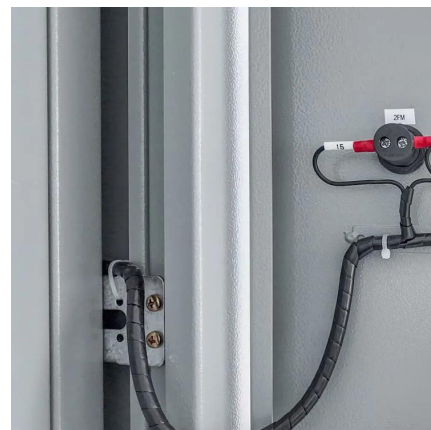


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