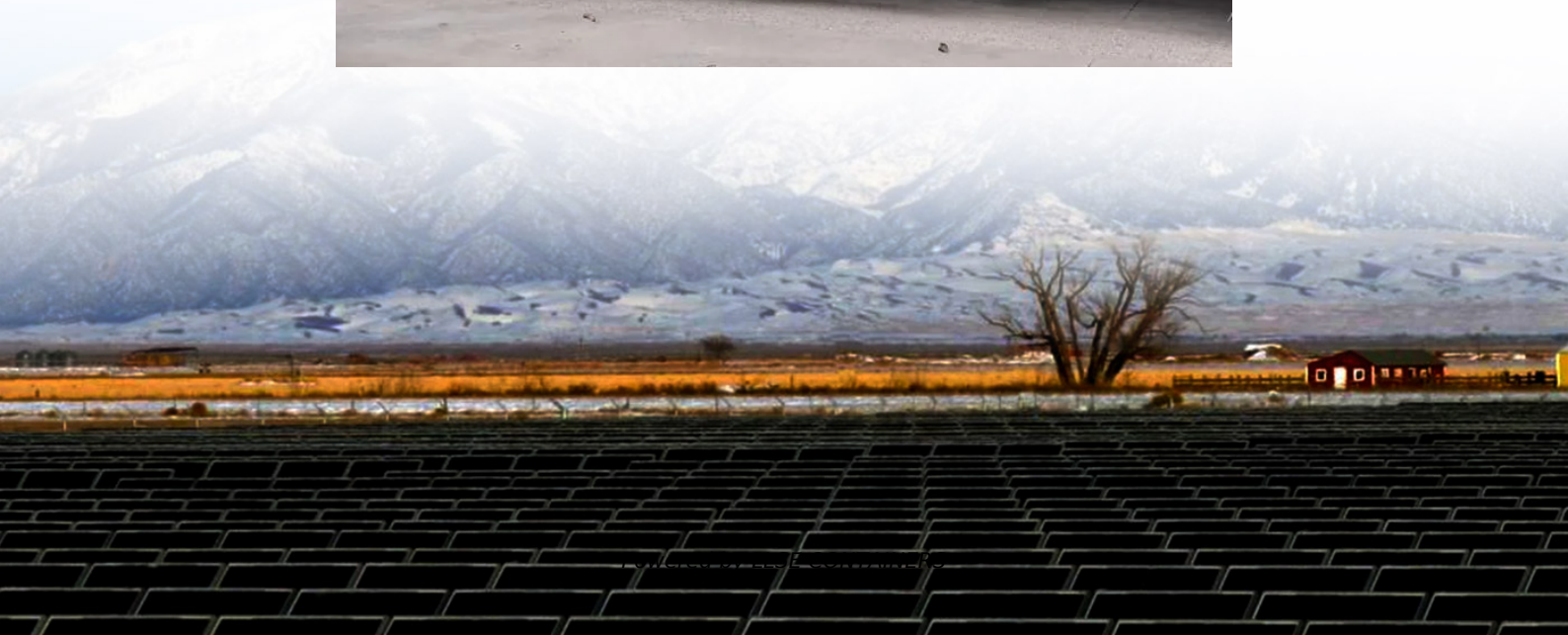


East Asia Solar Air Conditioning Modification Program





Overview

How much energy does air conditioning use in ASEAN?

According to the ASEAN Centre for Energy's 8th ASEAN Energy Outlook, air conditioning alone is expected to consume over 29.7 million tonnes of oil equivalent (Mtoe) of energy by 2050, or almost 40% of the energy required by the region's commercial sector.

Why does Southeast Asia need air conditioners?

The need for cooling is expected to increase dramatically as Southeast Asia's economy grows faster and temperatures continue to rise. In an effort to achieve thermal comfort, which is believed to improve well-being and productivity and, consequently, overall quality of life, more and more buildings are installing air conditioners.

Can solar energy be used in building air-conditioning systems?

Singh and Das [23 – 26] investigated the potential application and operational strategies of solar energy in the field of building air-conditioning systems, the findings revealed that the incorporation of solar energy can substantially decrease the energy consumption of air-conditioning systems while enhancing their economic viability.

How many air conditioners are in the ASEAN region?

Today, the ASEAN Regional Policy Roadmap for Energy Efficient Room Air Conditioners (2022-2025) indicates that Air conditioner ownership in the ASEAN region is projected to increase significantly, with estimates suggesting that the number of units will grow from nearly 50 million in 2020 to approximately 300 million by 2040.



East Asia Solar Air Conditioning Modification Program



[Solar adsorption air conditioning system](#)

Oct 1, 2021 · One of the most attractive alternative solutions is the incorporation of solar energy into air conditioning and refrigeration unit, which is known as a 'solar-driven air conditioning' ...

[Promotion of Higher Efficiency Air Conditioners in ASEAN: A ...](#)

Feb 1, 2015 · In recognition of this challenge, ICA, UNEP and its partners, launched the ASEAN Standardization Harmonization Initiative for Energy Efficiency (ASEAN SHINE), a regional ...



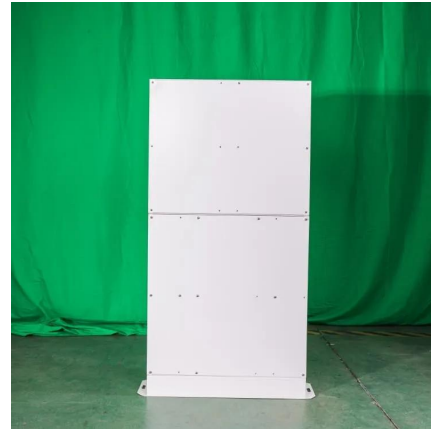
[Asia Solar Air Conditioning Market Size and Forecasts 2031](#)

The Asia Solar Air Conditioning Market is witnessing rapid growth as demand for energy-efficient and sustainable cooling solutions rises across residential, commercial, and industrial sectors.



[Driving Passive Cooling Implementation ...](#)

Nov 28, 2024 · Despite its deep roots in local culture, passive cooling is still underutilised in modern Southeast Asian architecture. Although recent ...



[Energy, Environmental, and Economic Feasibility Assessment of Solar](#)

Mar 24, 2025 · Singh and Das [23 - 26] investigated the potential application and operational strategies of solar energy in the field of building air-conditioning systems, the findings revealed ...



[ASEAN SHINE > GRANTS PROGRAMME , SWITCH-Asia](#)

The Challenge Air conditioners (ACs) represent close to 50% of household electricity consumption in ASEAN (Association of Southeast Asian Nations). Currently, the market share of ACs with ...



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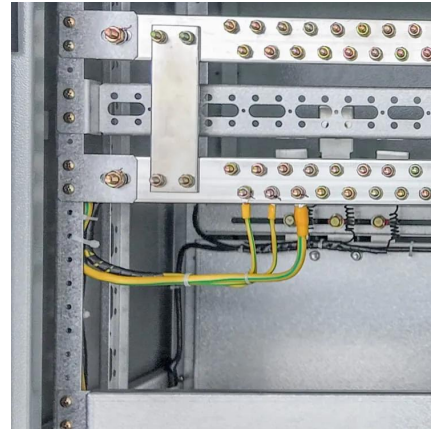
May 19, 2025 · ASEAN boosts air conditioner efficiency with stricter MEPS to meet rising cooling demand, cut emissions, and support sustainable energy goals by 2050.





[ASEAN's Path to Harmonised Air Conditioner Standards: ...](#)

May 19, 2025 · ASEAN boosts air conditioner efficiency with stricter MEPS to meet rising cooling demand, cut emissions, and support sustainable energy goals by 2050.



[Air Conditioning Transformation through Energy ...](#)

The major part of the substantial energy consumption and greenhouse gas emissions in Southeast Asia (SEA) is attributed to space cooling. Especially in the ASEAN region the ...

[Driving Passive Cooling Implementation through Building ...](#)

Nov 28, 2024 · Despite its deep roots in local culture, passive cooling is still underutilised in modern Southeast Asian architecture. Although recent trends have brought sustainable ...



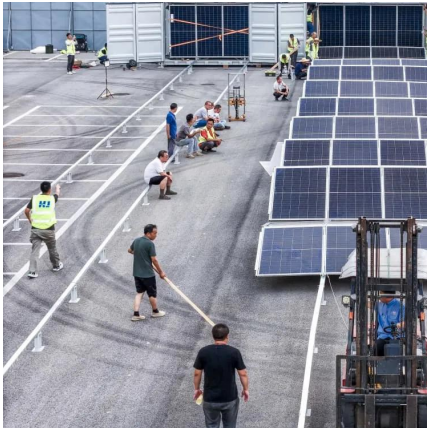
[Recommendations for Updating the ASEAN Regional ...](#)

Jul 22, 2022 · In 2012, with grant from the European Union's SWITCH-Asia program (1.7 million EURO), the ASEAN-SHINE program was established as the public-private collaboration ...



[Energy, Environmental, and Economic ...](#)

Mar 24, 2025 · Singh and Das [23 - 26] investigated the potential application and operational strategies of solar energy in the field of building air ...



[Assessment of Solar and Desiccant-Assisted Building Air-Conditioning](#)

Mar 17, 2025 · In this paper, the operational decoupled cooling and ventilation strategies of a desiccant-integrated and solar energy-regenerated air conditioning system are assessed, ...

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