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## Southeast Asia Energy Outlook

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Lasting collaboration between Southeast Asia and the IEA
May 2022


April 2023


October 2022


March 2023 Roadmap to Net Zero Emissions in Indonesia
September 2022


## Government responses are fast-tracking the clean energy economy

Clean energy investment in the Stated Policies Scenario


The US Inflation Reduction Act, the EU's Fit for 55 package, Japan's GX, China's new clean energy targets and India's solar revolution propel clean energy investment to new highs, but $\$ 4$ trillion is needed by 2030 to be on track for $1.5^{\circ} \mathrm{C}$

## Peak fossil fuel demand is coming this decade

Fossil fuel demand in the Stated Policies Scenario, 1900-2050


Today's policy settings are now sufficiently strong that they produce a distinct peak in fossil fuel use before 2030

## Keeping the door to $1.5^{\circ} \mathrm{C}$ open

Global energy related $\mathrm{CO}_{2}$ emissions


Policy and technology progress since 2015 has shaved $1^{\circ} \mathrm{C}$ off projected warming, a step in the right direction; but much more needs to be done in order to avoid severe climate disruptions

## Southeast Asia is an emerging heavyweight of global energy

Total primary energy supply in Southeast Asia by fuel and country



The 10 member economies of the Association of Southeast Asian Nations (ASEAN) are among the world's fastest growing, but there are strong country-by-country economic and energy variations

## Announced climate ambitions have huge implications for energy



Today's policy settings in the STEPS imply continued strong reliance on fossil fuels to meet future demand growth; meeting new net zero goals will require major efforts to improve efficiency $\&$ switch to low emissions power $\&$ fuels

## Today's pathway brings significant energy security risks

Crude oil trade to Southeast Asia by origin in the Stated Policies Scenario


Southeast Asia's reliance on fossil fuels to meet rising demand for energy is proving to be a significant vulnerability in today's energy crisis and - on today's policy settings - these risks are set to increase

## The region is not on track to hit its sustainability goals

Key sustainability indicators in Southeast Asia in the Stated Policies Scenario
$\mathrm{CO}_{2}$ emissions
3.0


Share of population with access to clean cooking


Today's policy settings produce a rising trend for energy-related emissions and - while Southeast Asia has made impressive progress with access to electricity - universal access to clean cooking fuels is not secured

## Flexibility is the watchword for a wind and solar-rich power mix

Power generation and shares of variable renewables in Southeast Asia in the Sustainable Development Scenario


Today's contractual arrangements for coal- and gas-fired plants offer no incentives for these plants to provide flexibility; this is one of the areas that will need to change to enable a rapid rise of clean electrification

## A surge in clean energy investment is needed this decade



National \& international public finance will be essential to meet the region's energy security \& climate goals, but governments need to do much more to attract private investors by reducing regulatory and financing risks

## Renewables financing costs differ in the region

Weighted average cost of capital for onshore wind and utility-scale solar PV, local currency terms


[^0]Cost of capital is lower in those countries with fewer policy and integration risks, as well as more developed financial systems

## A new global energy economy is emerging



Southeast Asia's critical mineral resources and manufacturing prowess could position the region well in clean energy supply chains; rapid growth in clean energy deployment will create huge market opportunities

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[^0]:    Source: IEA and Imperial College London (2023)

