

Southeast Asia Energy Outlook 2017

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October 27, Manila

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World Energy Outlook Special Report

■ Southeast Asia is emerging as major global energy player

- *Strong economic & population growth, urbanisation & industrialisation*
- *Demand increased by 60% since 2000, strong potential for further growth*

■ A region with multiple energy challenges

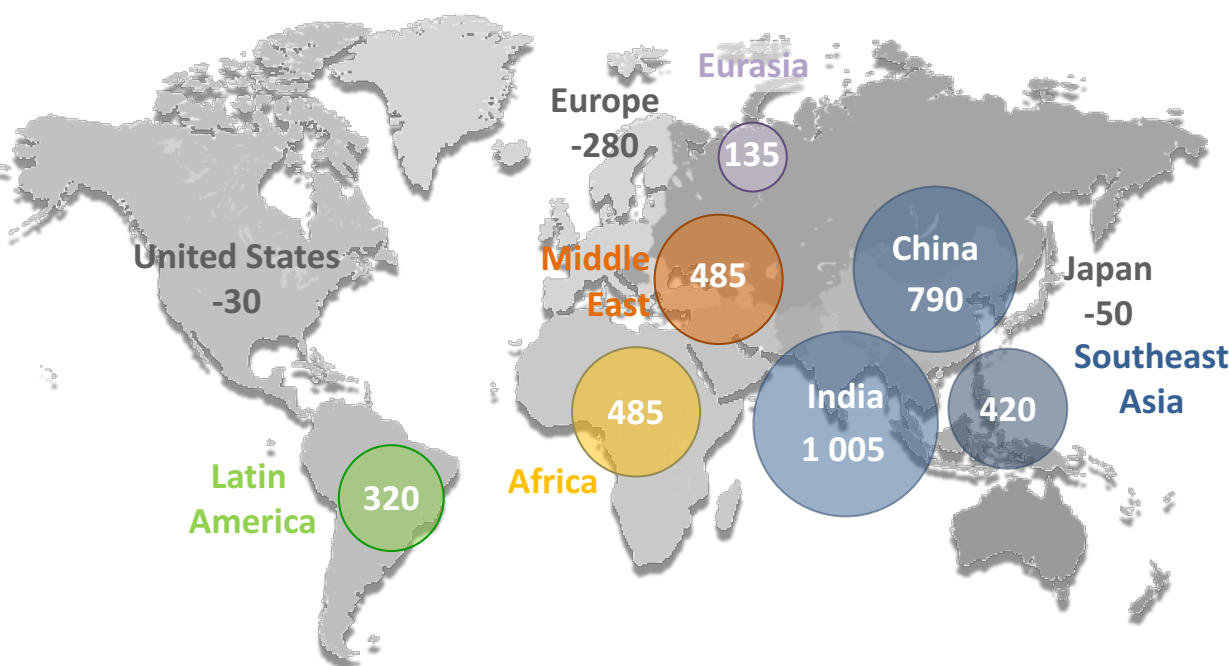
- *65 million lacking access to electricity, 250 million reliant on solid fuels for cooking*
- *Dwindling position as a gas exporter, and a rising dependency on imported oil*
- *Poor air quality, vulnerability to effects of climate change*

■ Opportunities for a cleaner energy future

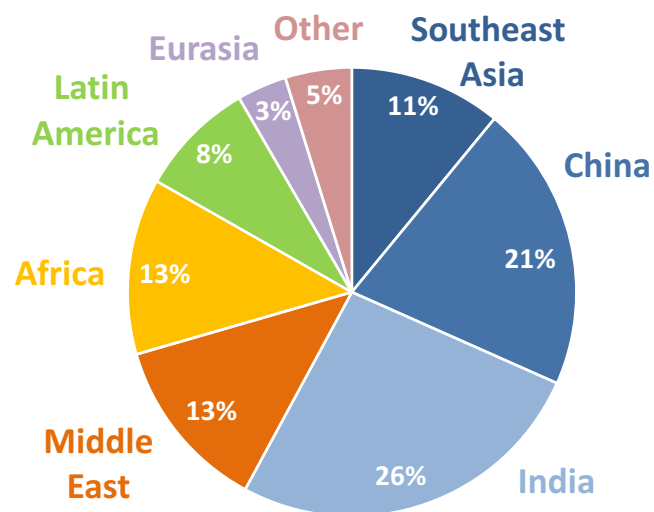
- *Paris Agreement ratified by all, increasing attention to renewables & efficiency*
- *Fossil fuel subsidy reforms making progress*

A shift in the global centre of gravity for energy

Change in primary energy demand to 2040 in the New Policies Scenario (Mtoe)



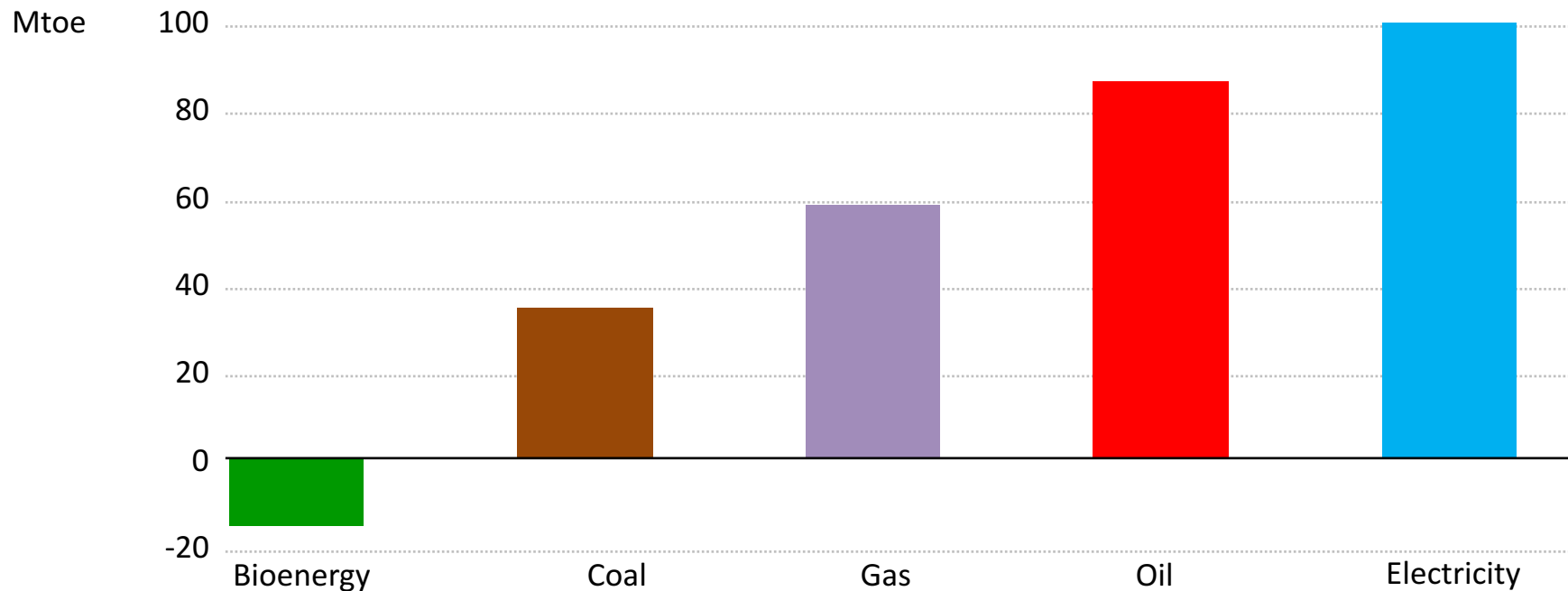
Share of global growth 2016-2040



Southeast Asia, India and China are the engine of future energy demand growth, together accounting for almost 60% of the global increase to 2040

Electricity leads demand growth

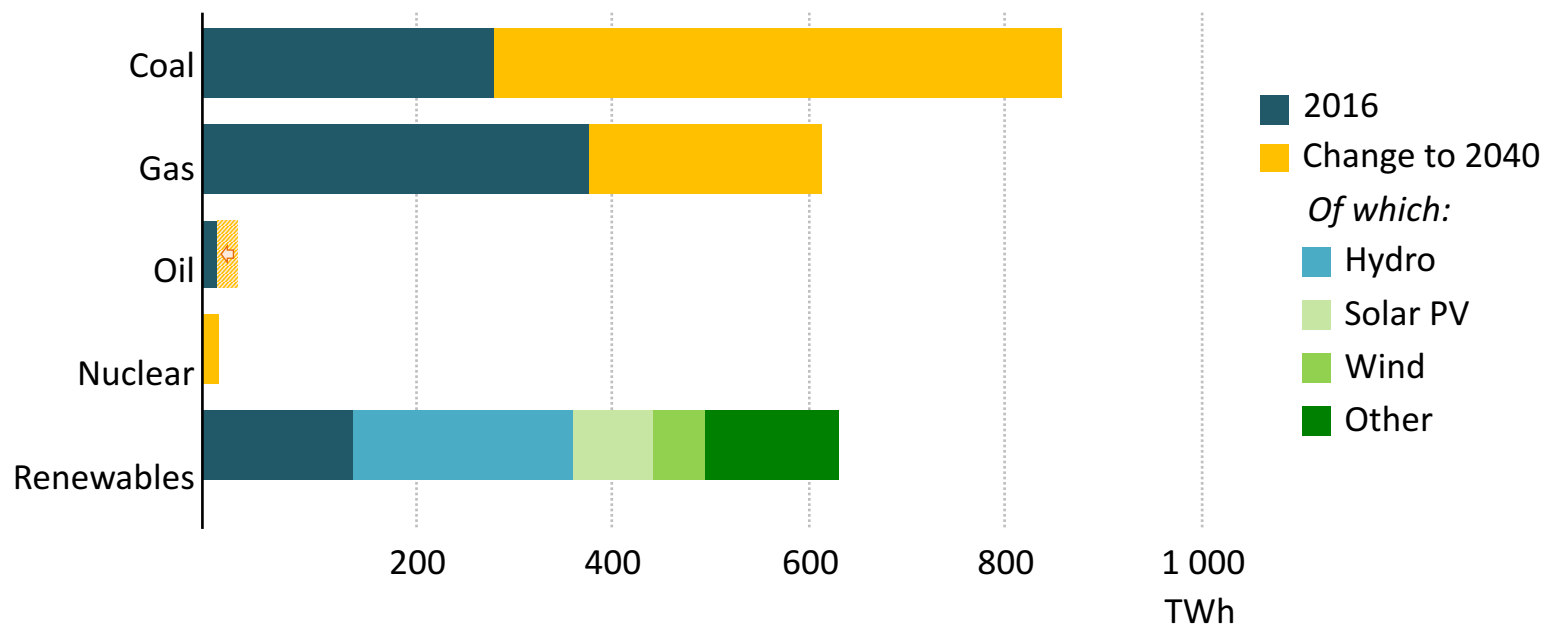
Change in total final energy consumption in the New Policies Scenario, 2016-2040



A growing middle class proves a formidable factor behind both the increase in electricity (in households) and oil (for transport)

The power mix becomes more diversified

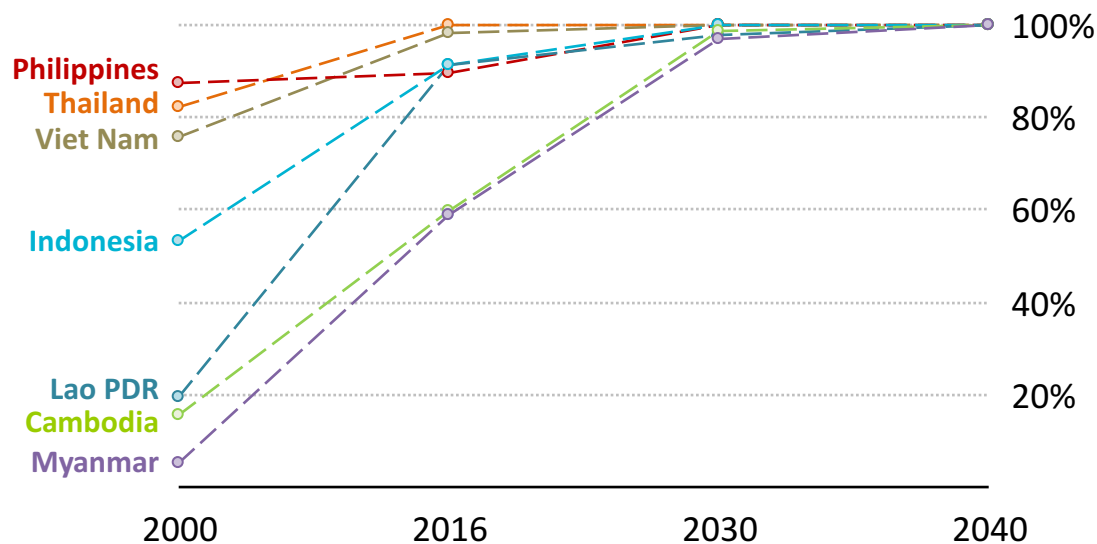
Power generation by fuel in the New Policies Scenario



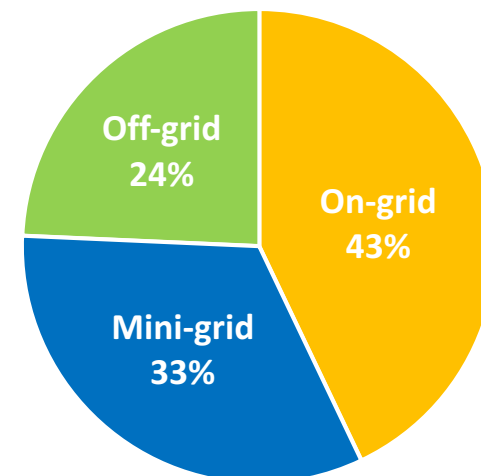
Renewables account for the largest share of installed capacity in 2040, but coal plays a major role in the projected generation mix

The road to universal electricity access

Access to electricity



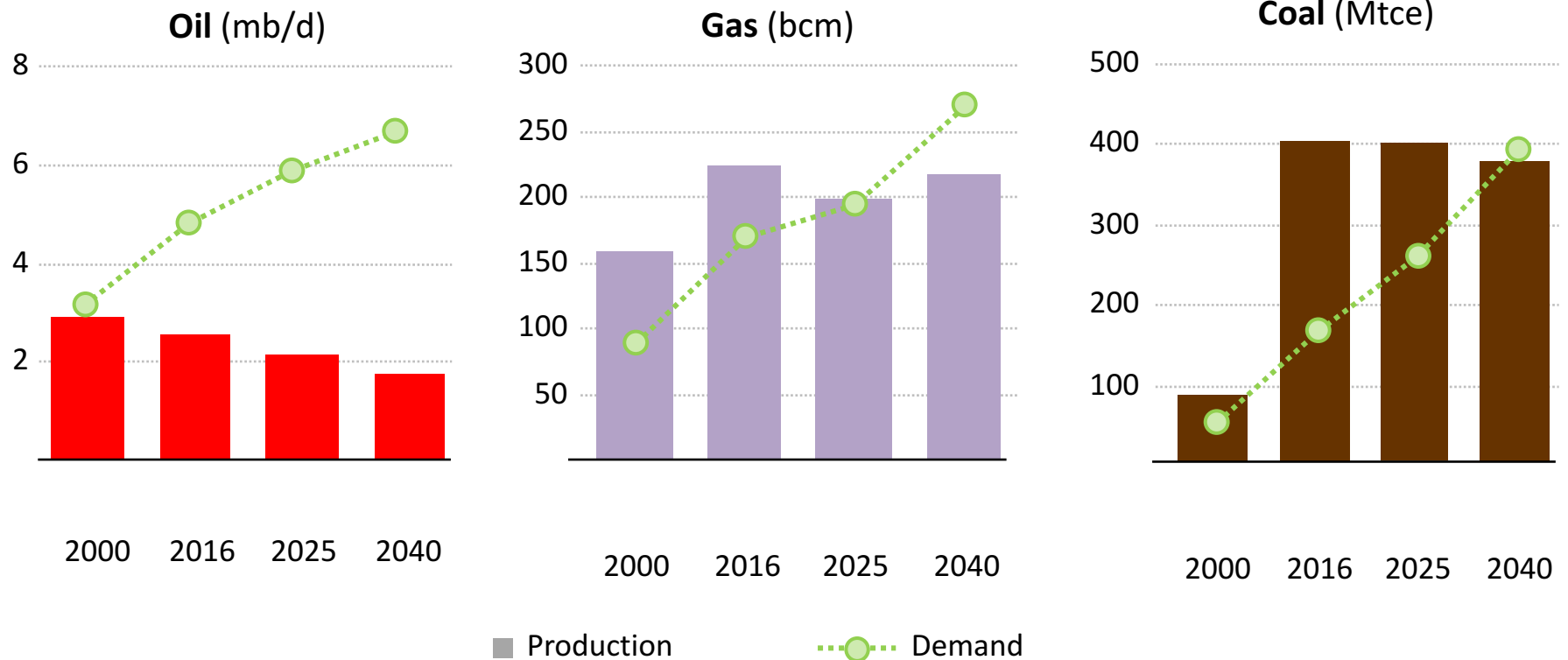
Access by type of connection, 2030



All countries in the region achieve universal access to electricity by the early 2030s, deploying a range of technologies depending on circumstance

A growing need for imports

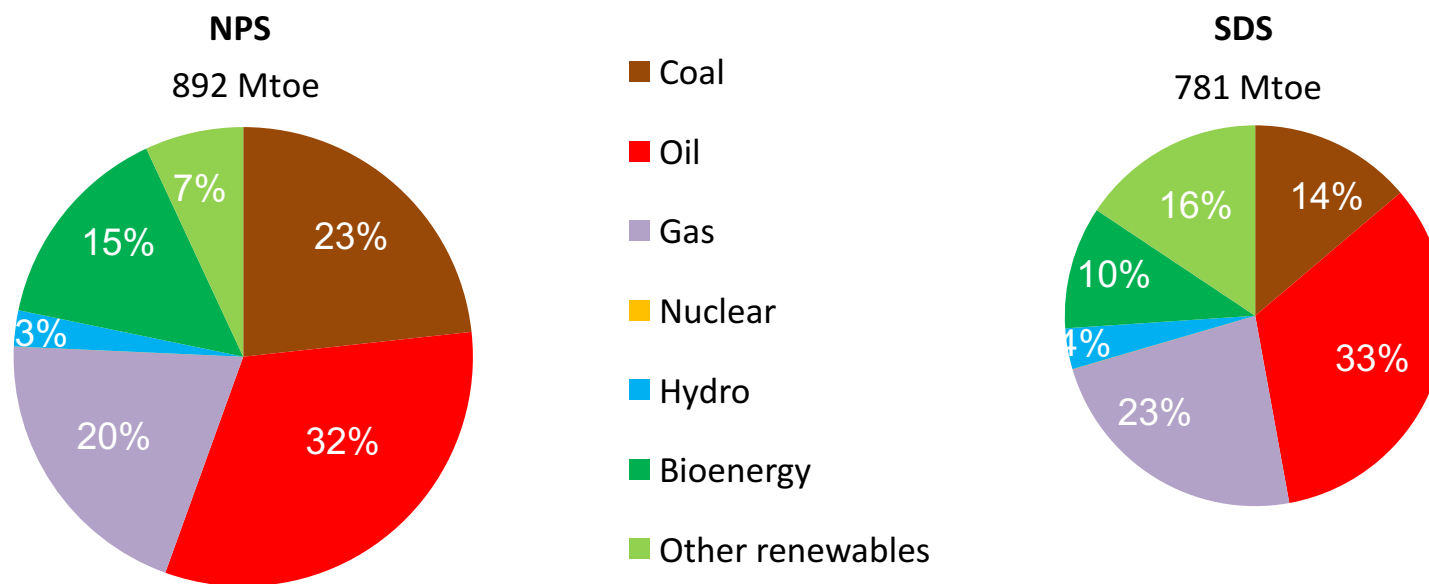
Fossil fuel production and demand to 2040 in the New Policies Scenario



By 2040, Southeast Asia is a net importer of all fossil fuels, and the import bill exceeds \$300 billion

Toward a more secure and sustainable path

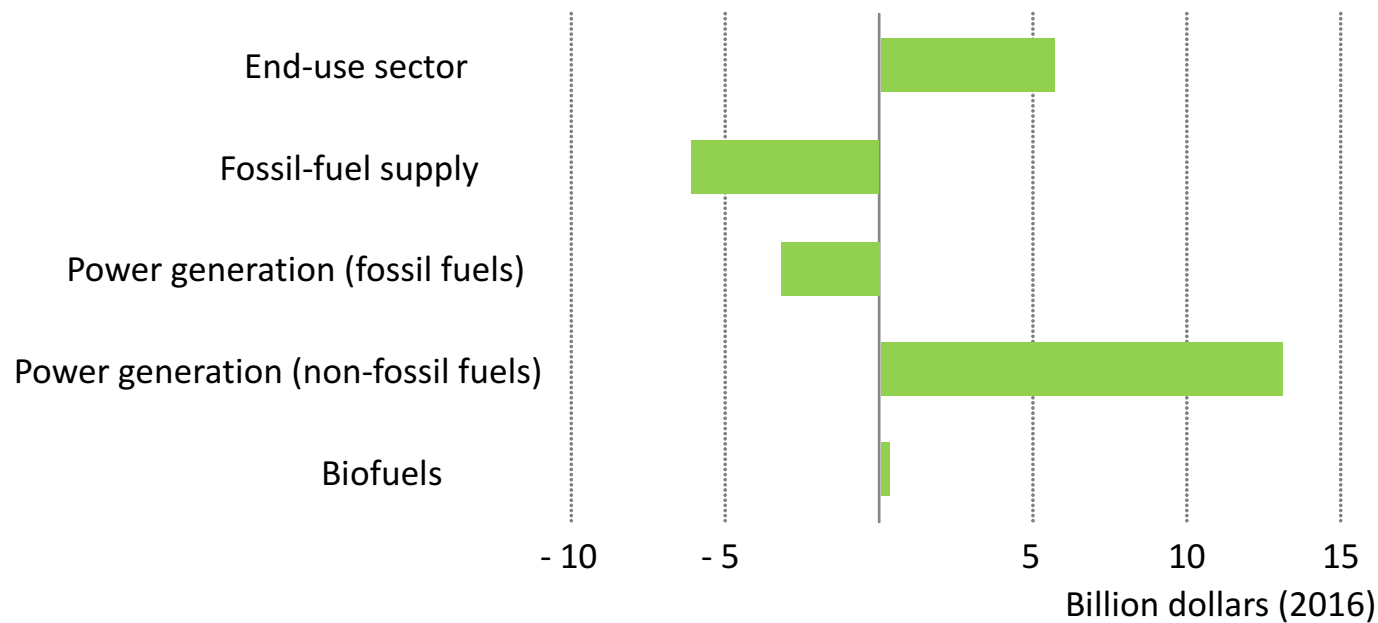
Primary energy demand in 2030 in the New Policies Scenario and the Sustainable Development Scenario



Efficiency and renewables play a significant role in the clean energy transition

Clean energy transition requires significant reallocation of investment

Annual additional energy investment to 2030 in the Sustainable Development Scenario, relative to the New Policies Scenario

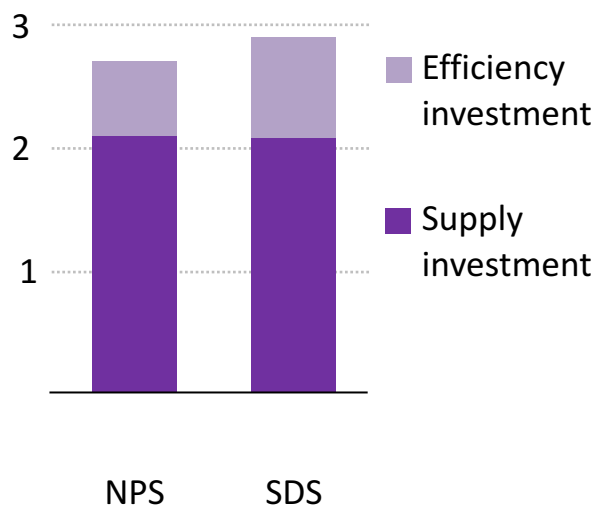


Cumulative investment in the Sustainable Development Scenario moves away from fossil fuels towards renewables and efficiency

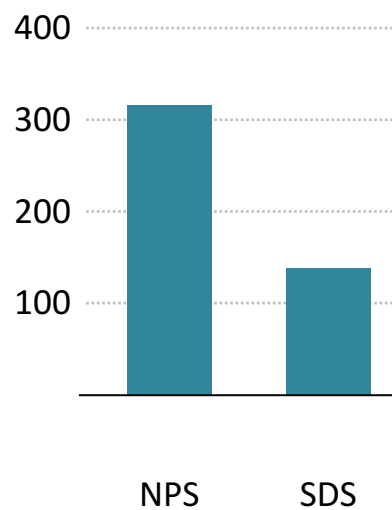
A sustainable pathway for Southeast Asia

Key indicators for New Policies (NPS) and Sustainable Development (SDS) Scenarios

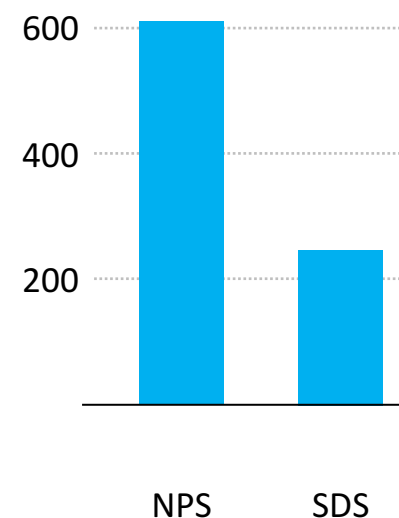
Cumulative investment
(Trillion dollars)



Fossil fuel import bill
(Billion dollars)

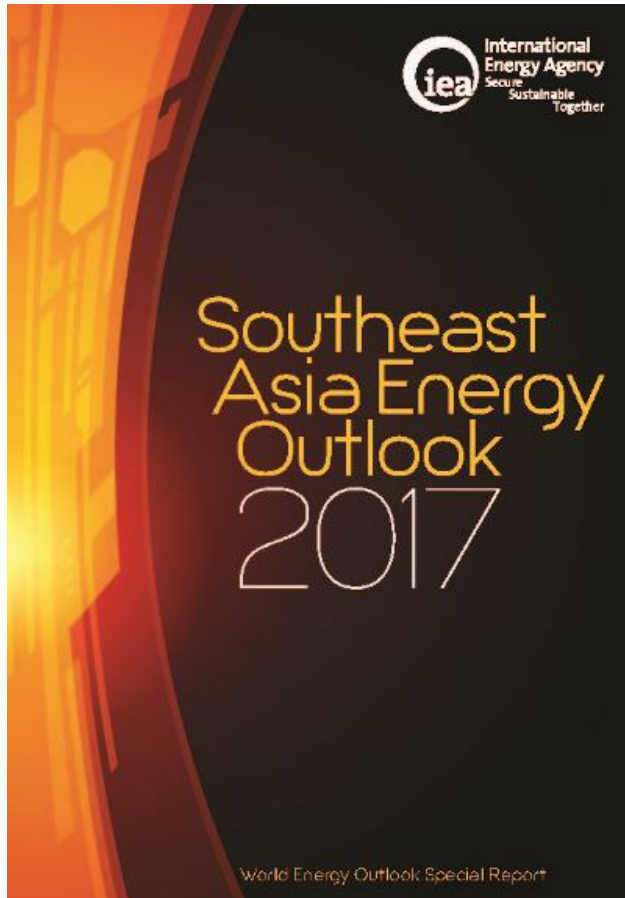


Premature deaths from air pollution
(Thousand people)



With a small increase in overall investment, but a major reallocation of flows, Southeast Asia can achieve a more sustainable pathway with multiple benefits

- **Robust economic growth and fast-paced demographic change mean that Southeast Asia's role in global energy is set to expand**
- **The region faces myriad energy challenges; it is crucial for policy-makers to pursue a consistent strategy to meet them**
- **Vast investment of around \$ 3 trillion needed to meet growing demand, making private participation and co-operation with international organizations essential**
- **Energy efficiency, subsidy reform and enhanced regional integration play vital roles**
- **A more sustainable energy future is attainable by reorienting investments, bringing financial, climate and health benefits**
- **With international engagement on energy more important than ever, the IEA stands ready to be a strong partner for the region**

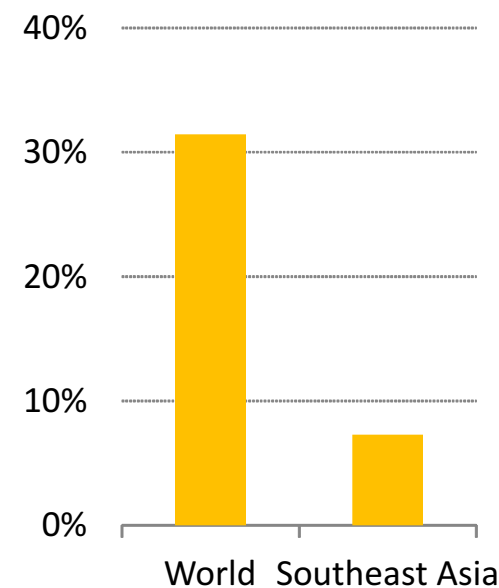
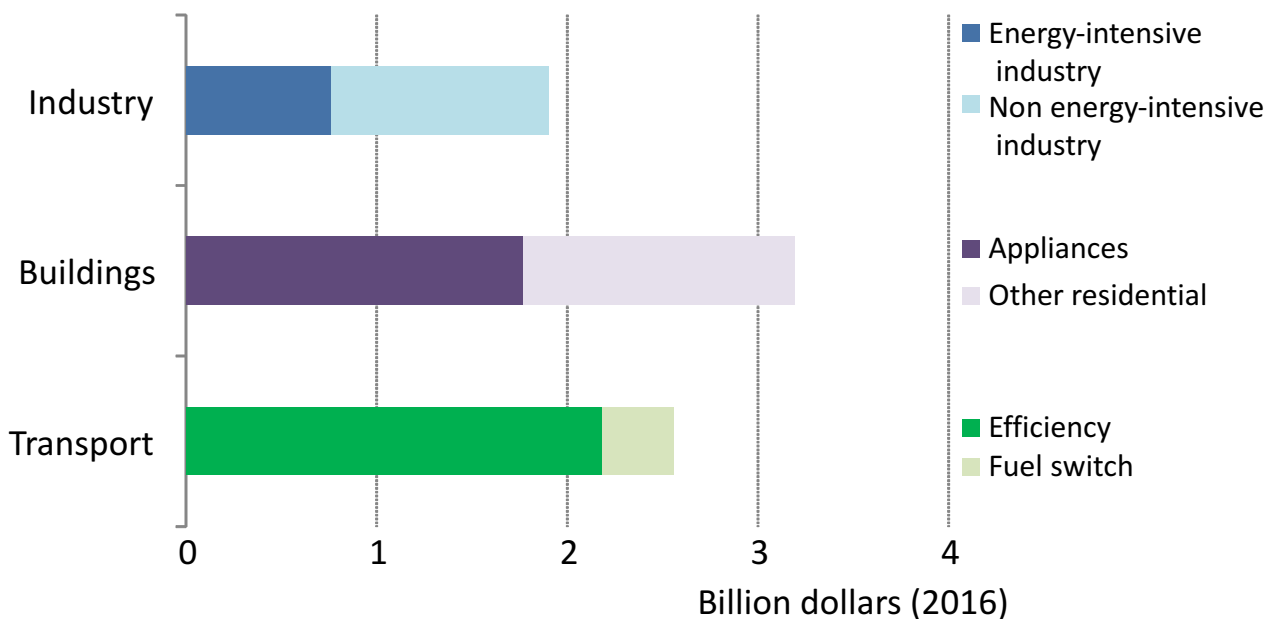


The report is available at:
<http://www.iea.org/southeastasia/>

Mobilising efficiency investment in end-use sectors

Average annual additional investment to 2030 in end-use sectors in the Sustainable Development Scenario, relative to the New Policies Scenario

Share of final consumption covered by mandatory efficiency regulation



Efficiency investment requires effective regulatory frameworks & incentives