



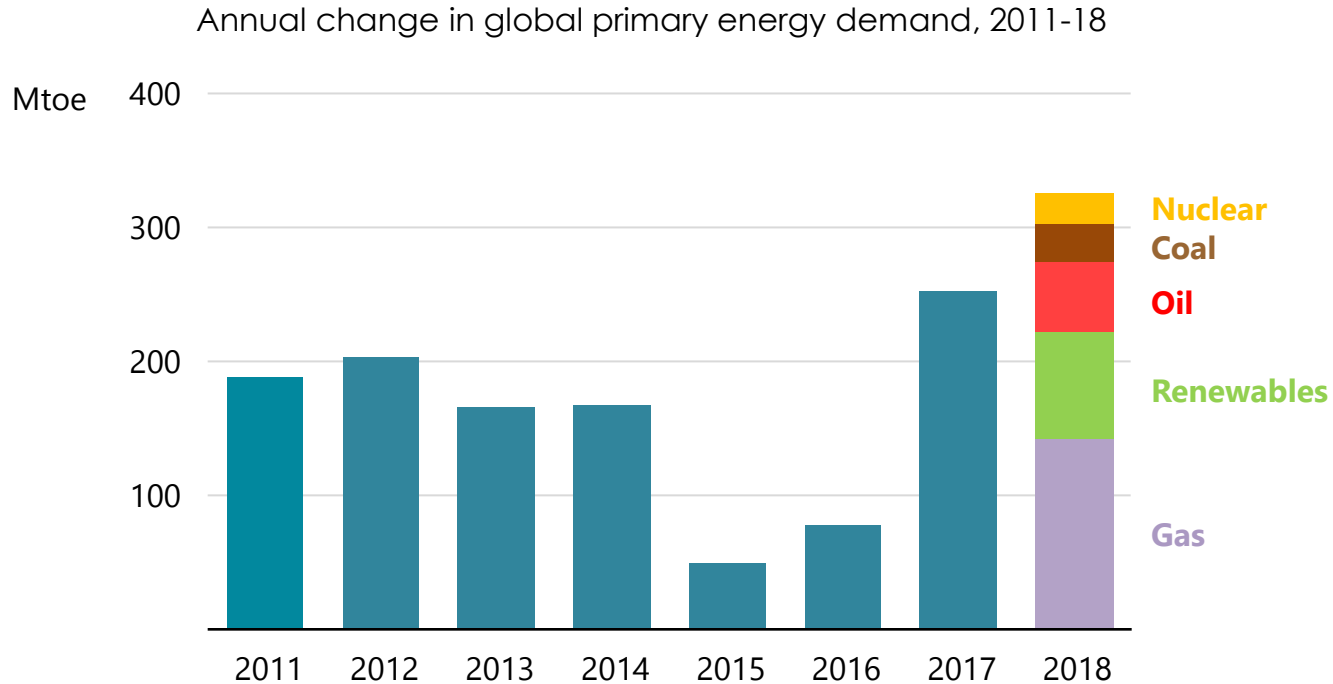
The future of energy in Southeast Asia

Dr. Fatih Birol, Executive Director

37th ASEAN Ministers of Energy Meeting

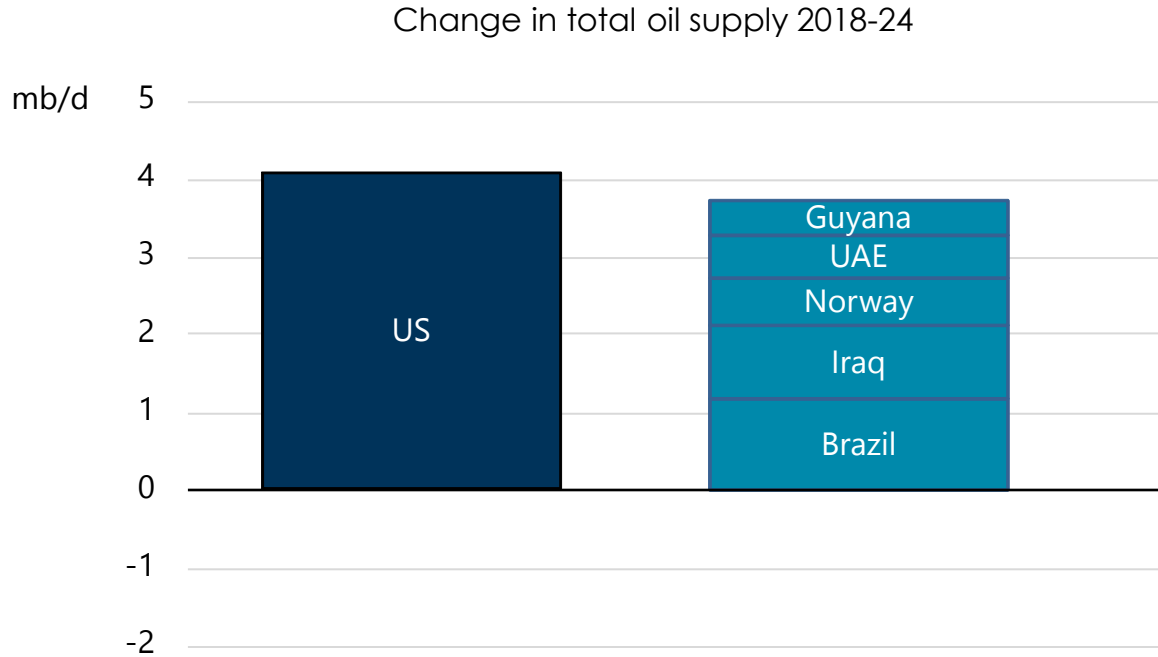
Bangkok, 4 September 2019

2018 – A remarkable year in energy



Global energy demand grew by 2.3% in 2018, the fastest pace this decade, driven by a robust global economy, unseasonable weather, and moderate energy prices

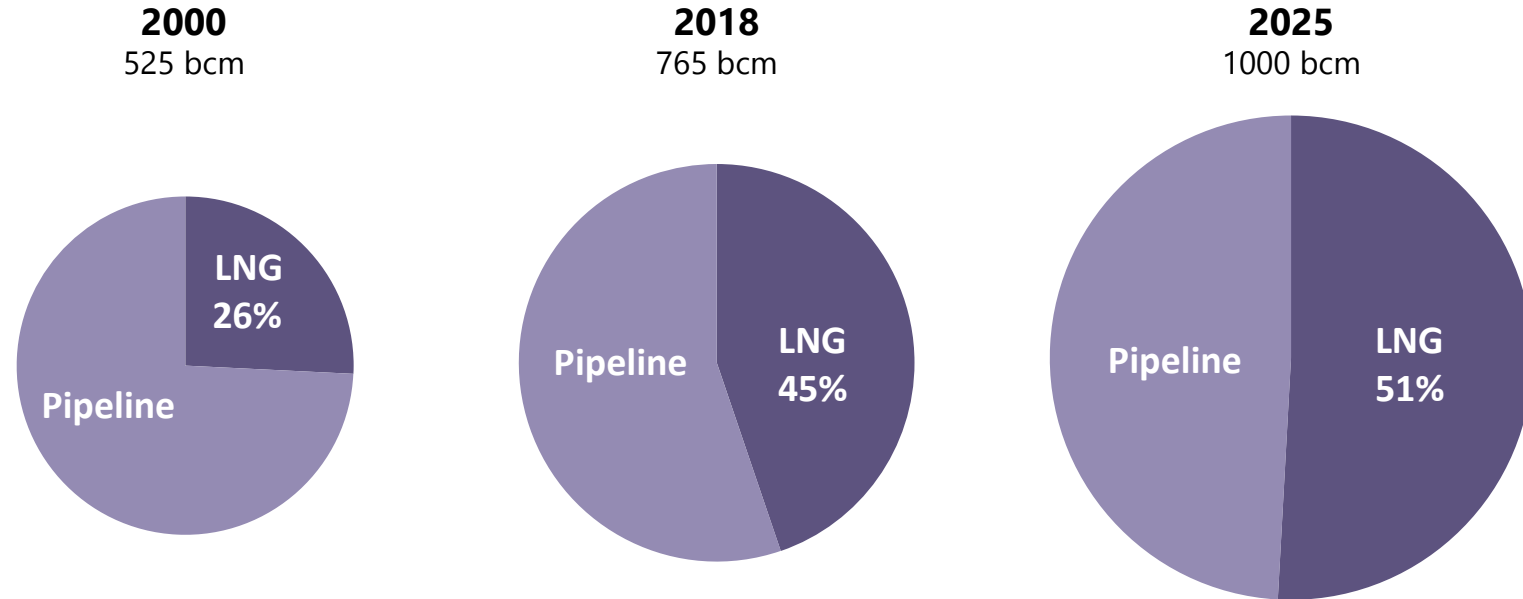
US leads the way in global oil supply growth



US expansion of oil supply in the next five years makes up 70% of global supply growth. Other notable gains occur in Brazil, Iraq, Norway, the UAE and Guyana

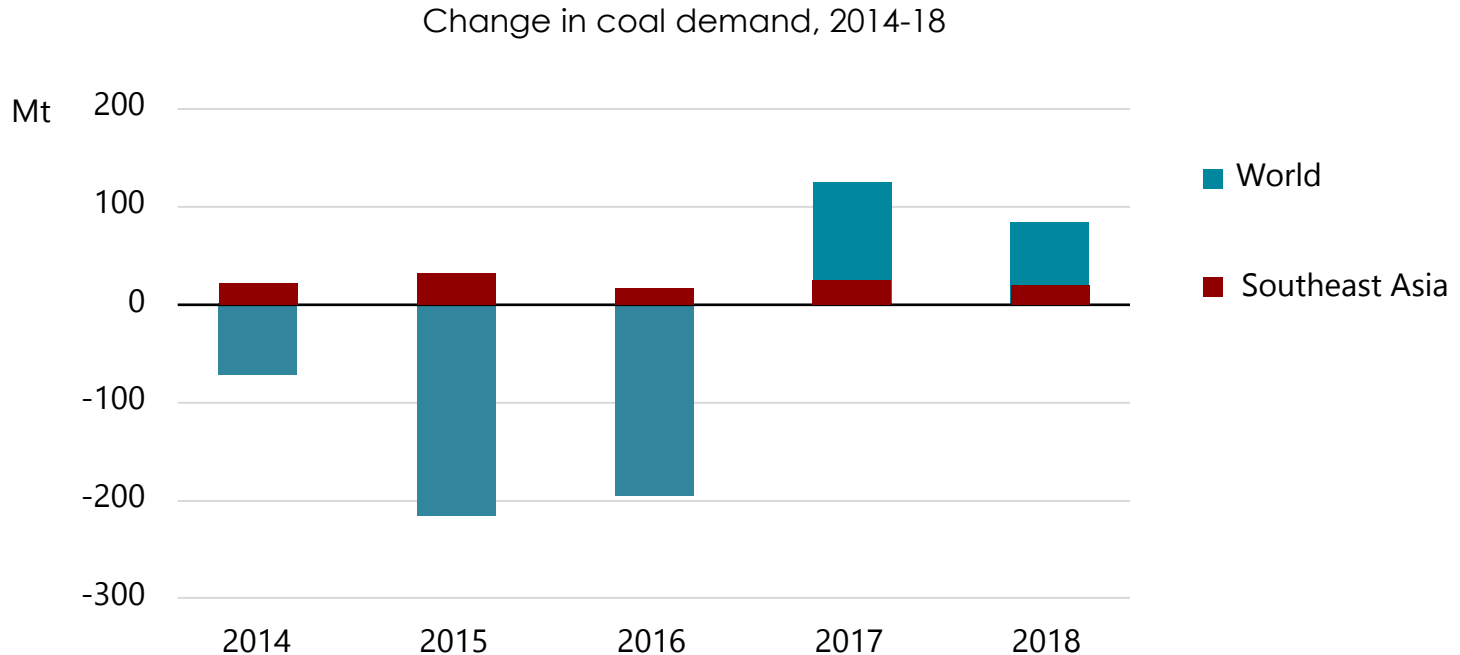
LNG is spurring a second natural gas revolution

Share of LNG in global long-distance trade



LNG from the United States, Australia, Qatar & elsewhere is expanding gas supply, underpinning the shift towards a more flexible, resilient & interconnected global gas market

Global coal demand grew again in 2017 and 2018

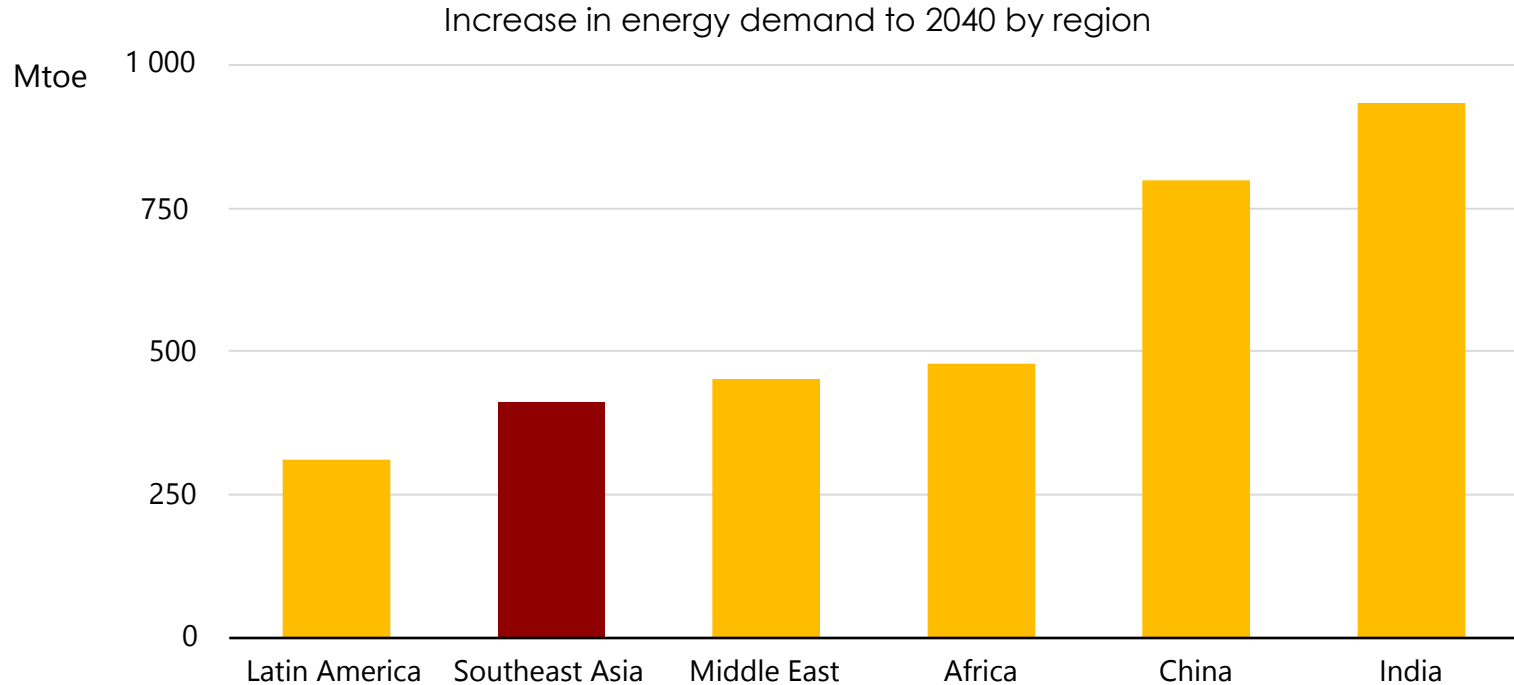


After several years of decline, global coal demand returned to growth in 2017 and 2018; Southeast Asia's coal demand has been on an upward trend for decades

Southeast Asia – An emerging heavyweight in global energy

- Southeast Asia is home to almost one in ten people, and is the **4th largest economy in the world**, meaning it is increasingly driving global energy trends
- Energy demand has grown by 80% since 2000, at a rate **far exceeding the global average**, underpinning its rapid development but also posing challenges
- **Energy consumption subsidies** in Southeast Asia bounced back in 2018 to \$47 billion, encouraging wasteful consumption and slowing down the pace of efficiency gains
- The region is becoming **ever-more dependent on imported energy**, raising **energy security** challenges and pushing up import bills
- Driven by rapid technology developments and policy goals, the region now has an **opportunity to re-shape its energy future**, which the **IEA is ready to support**

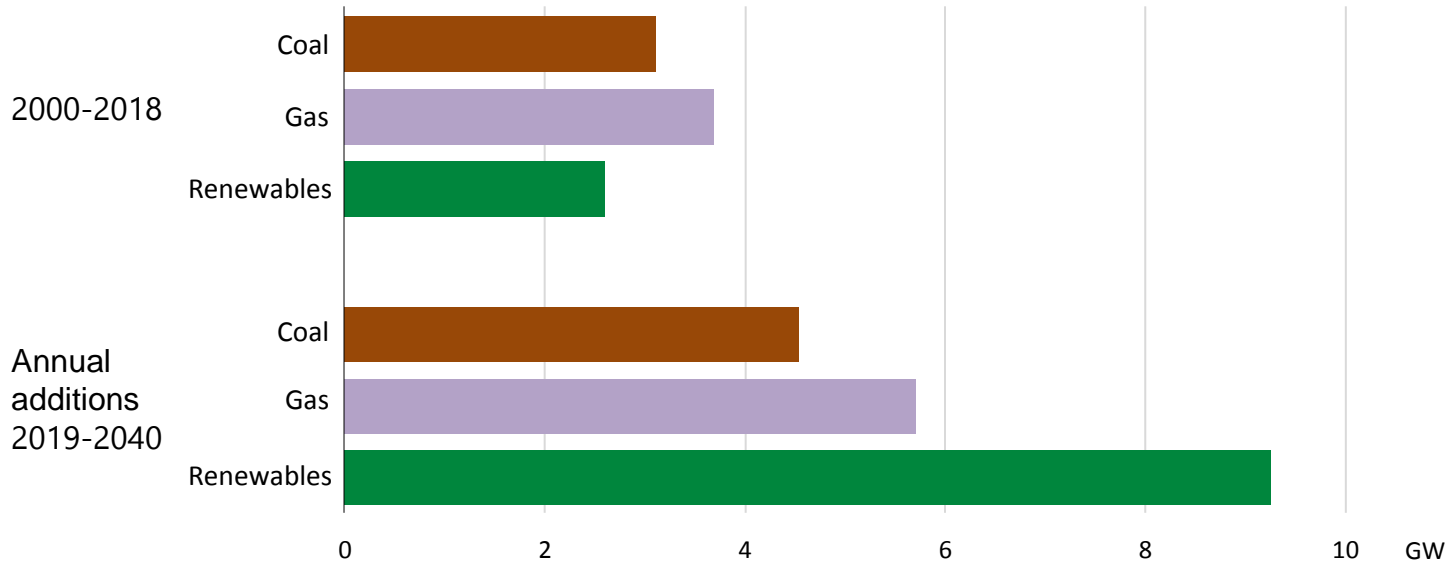
IEA's Southeast Asia Energy Outlook: Preview to ASEAN Ministers



Rising incomes and population mean that Southeast Asia adds the equivalent of another Japan to global energy demand to 2040

IEA's Southeast Asia Energy Outlook: A gradual diversification in power

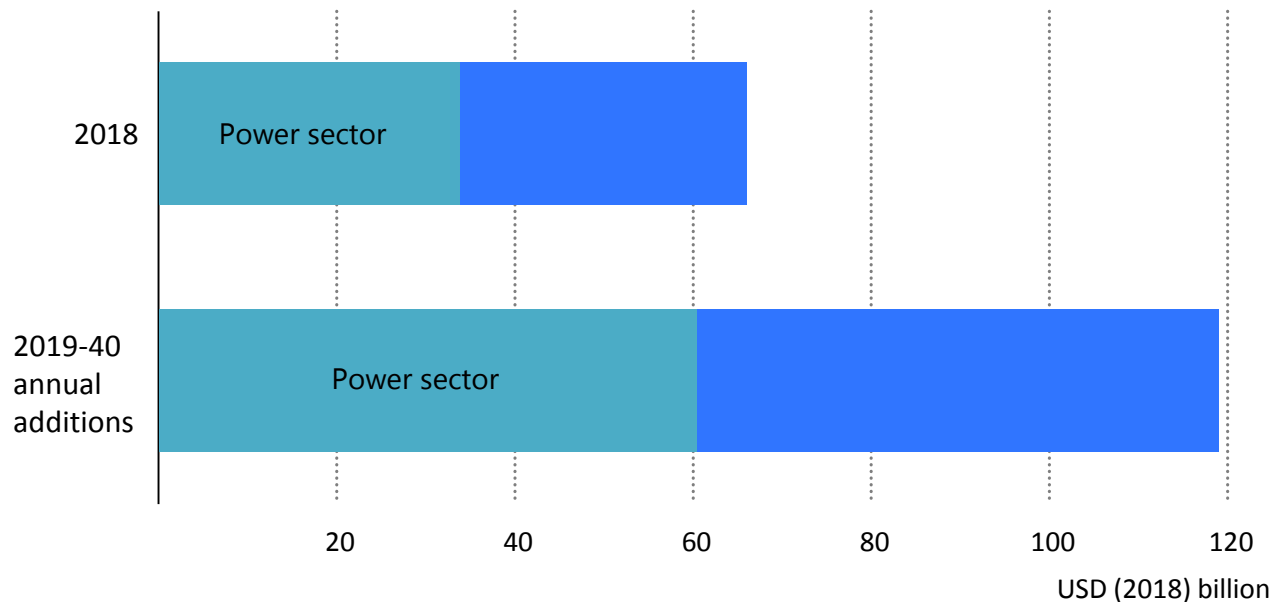
Southeast Asia's average annual net capacity additions by type



Power capacity additions of 450 GW are needed to 2040, equivalent to the power systems of Germany, France and the UK combined, as electricity grows at twice the rate of overall energy demand

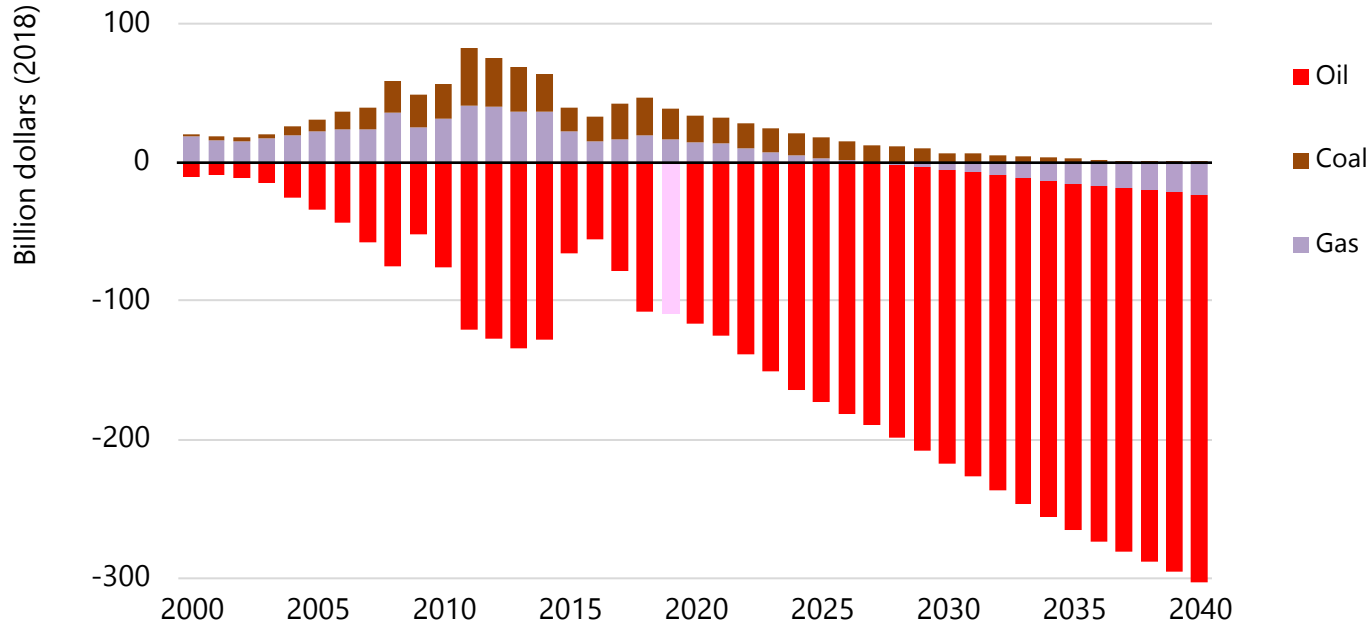
IEA's Southeast Asia Energy Outlook: Much more investment is needed

Energy investment in 2018 vs. required annual average investment, 2019-40



Annual energy investment in Southeast Asia in the period to 2040 needs to almost double compared with current levels, with particular emphasis needed on investment in the power sector

IEA's Southeast Asia Energy Outlook: The import bill skyrockets



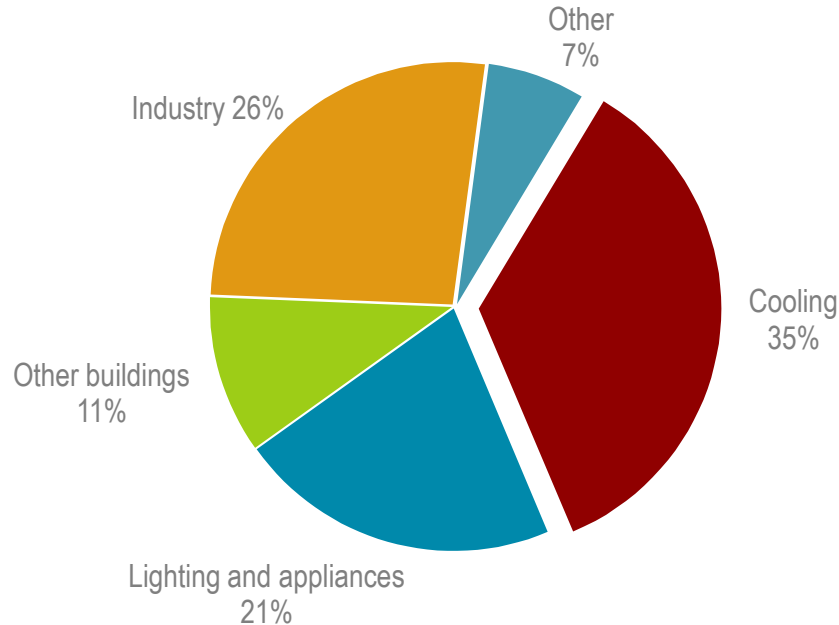
Southeast Asia faces an energy import bill of over \$300 billion/year by 2040 as oil imports surge; the region also becomes a net importer of both natural gas and coal

2019 ASEAN Ministerial Mandates to IEA: Multilateral power trade

- Following a call by ASEAN Member States in 2018, the IEA has undertaken extensive analysis on ASEAN power system integration and the links with renewables scale-up
- IEA's Feasibility Study for Multilateral Power Trade sets out the policy/regulatory options that ASEAN can pursue to enhance power trade
- The upside of greater power trade is large – allowing countries to take advantage of **low-cost generation sources**, **seasonality in supply**, and **access to renewable energy**
- IEA analysis shows that ASEAN greater trade will **reduce power costs** and **improve the security of electricity systems** while allowing for more renewables in the mix
- But **institutional coordination**, **better data-sharing**, & **common grid codes** are required as building blocks for greater power trade

2019 ASEAN Ministerial Mandates to IEA: Cooling efficiency

Share of final electricity demand growth to 2040 in ASEAN



Today, just 15% of ASEAN households have air conditioners versus 91% in Japan and 90% in the US; Cooling demand could be cut by 50% if the IEA's recommended policies are implemented

Key messages for Southeast Asia

- Increasing **energy investment** is a priority, particularly in the power sector, requiring clear policy and best-practice investment conditions
- With growing **energy security concerns**, more focus is needed on investment in domestic energy infrastructure & resources, and improvements to energy efficiency
- With rapidly falling costs and abundant resources, **renewable energy has a bright future**, but will need strong and consistent policy commitments
- **Power system integration** will provide multiple benefits for the region. The immediate priority is to establish the necessary building blocks for greater trade
- Building on the successful delivery of the two **2019 ASEAN Ministerial Mandates to the IEA**, we look forward to continuing to assist the region to tackle its energy policy challenges

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