



Recover Better with Sustainable Energy in Southeast Asia: A case for Energy Efficiency

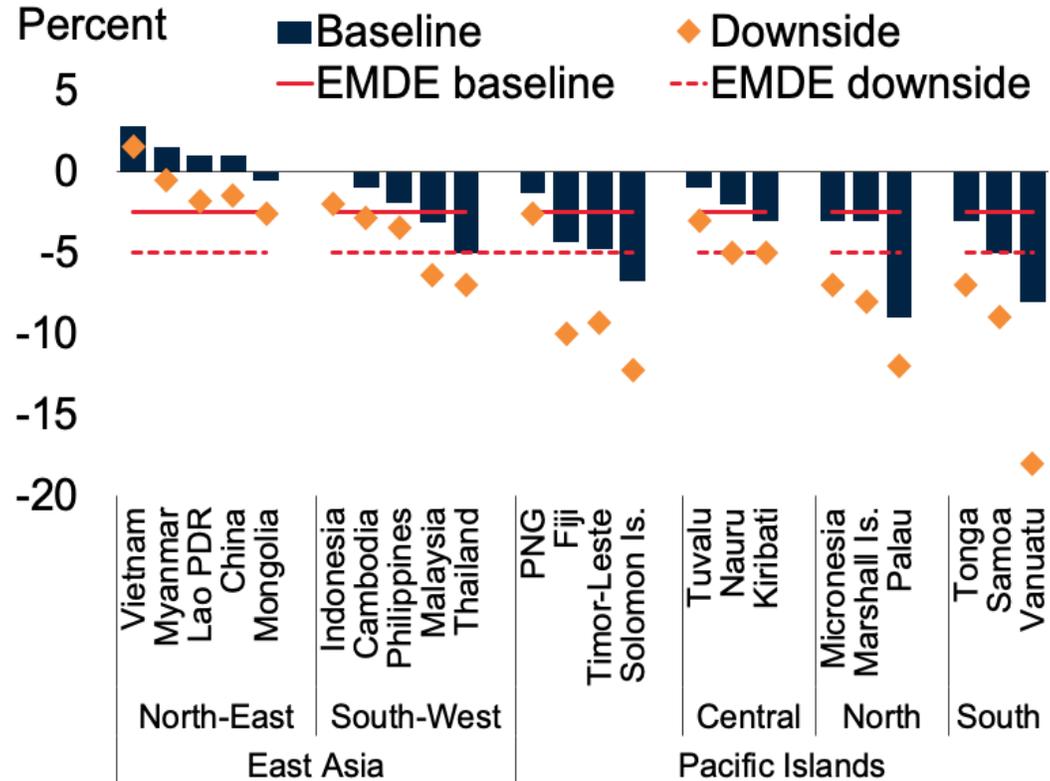
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Covid-19 has put Global and Asian Economies into worst contraction ever

East Asia and Pacific 2020 Growth Forecast



- Per IMF, Growth in Asia is expected to stall in 2020, which is the worst performance in last 60 years.
- North East Asia, ASEAN and the Pacific economic growth is expected to be limited to 0.5%.
- Emerging Markets and Developing Economies (EMDE) in Asia would/will experience severe economic contraction, and countries depending on tourism, oil/energy exports, SMEs and deep global value chains would experience most impacts.
- EMDE's in Asia are also consumption heavy economies and slowdown in demand has resulted in reduced manufacturing activity and household incomes.

SDG-7 by 2030 Progress – Key trends

Tracking SDG7: The Energy Progress Report 2020



We can no longer ignore the clean cooking crisis.



Covid-19 has impacted SDG-7 progress, but this is our reset moment. We can recover better.



The renewable energy opportunity is still to be fully realized.



Electricity access is growing, but not for everyone.



Energy inefficiency is costing us.





Southeast Asia has considerably improved access to electricity but there are ~789 million people in the world without access to electricity

Significant progress on electrification has been made since 2010, with the number of unelectrified people falling from 1.2 billion to 789 million in 2018.

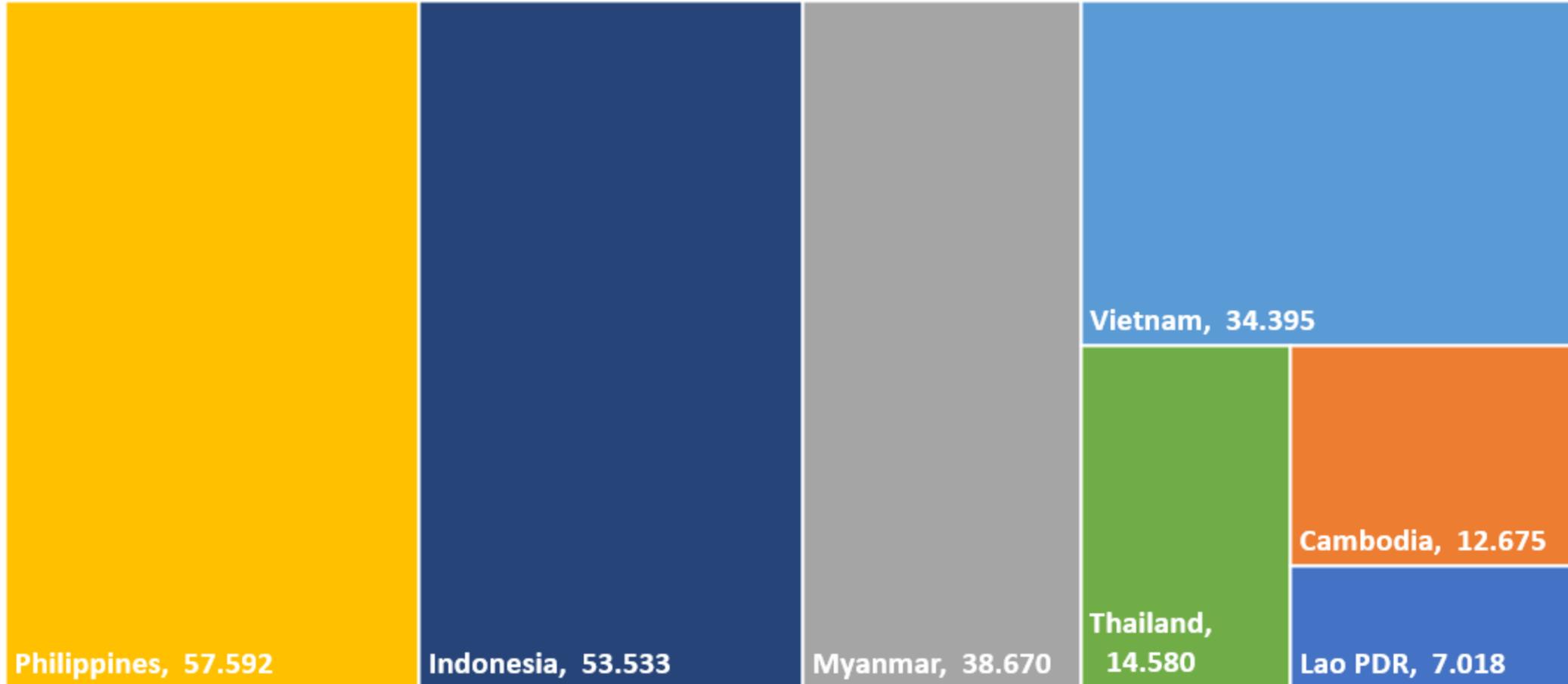


The decline was most significant in Asia, where the deficit shrank from 548 million in 2010 to 218 million in 2018, but in Africa the situation is basically stagnant.



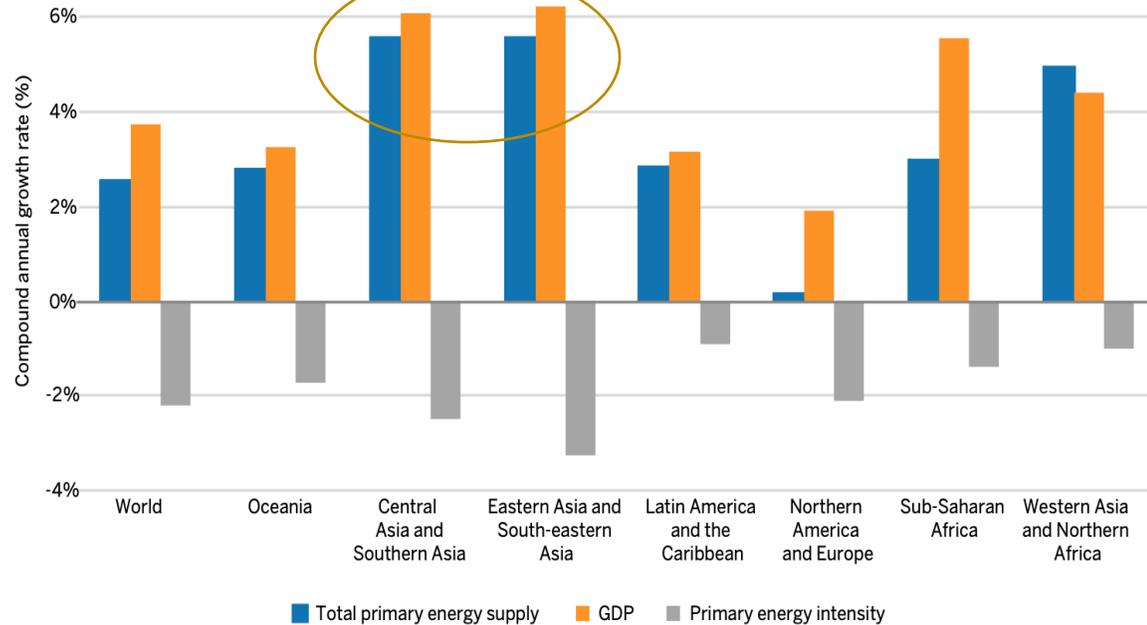
Southeast Asia has made excellent strides in electricity access, however, there are ~218 million people without access to clean cooking

Population in Southeast Asian countries without access to clean cooking (million)



Energy Efficiency is the “first” and “cheapest” fuel than needs to be capitalized in SE Asia

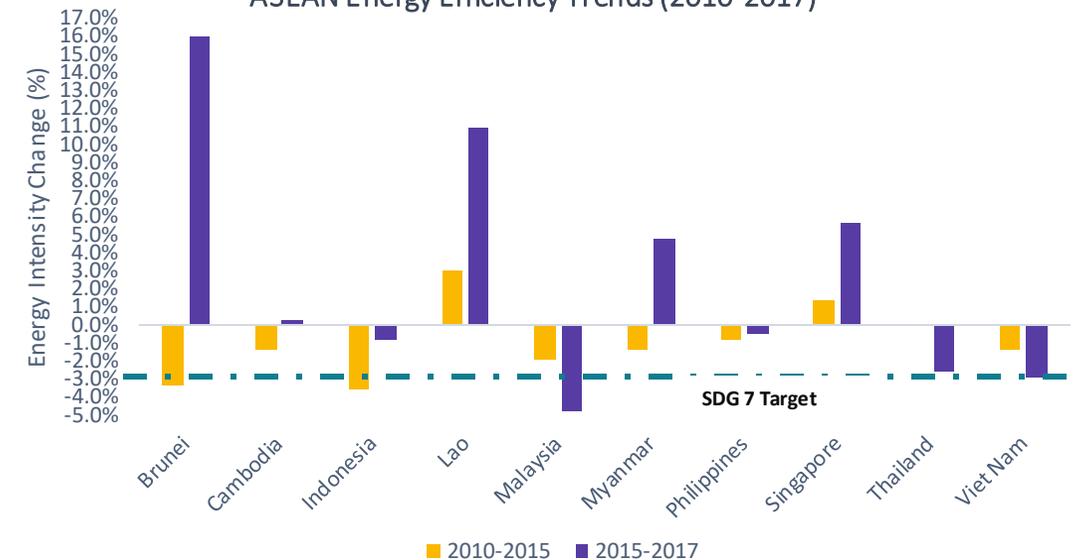
Asia has the fastest growing economy and energy demand in the world



- Asia is the global growth story with energy required to sustain its development efforts and meet its development potential
- Energy Efficiency is the cheapest fuel that can power businesses towards higher competitiveness and strengthen resilience.

- There is still a lot of untapped EE potential in Asia that remains to be unlocked.
- Malaysia, Thailand and Vietnam have sustained their progress, while Indonesia and Philippines have slowed their progress.
- Brunei, Lao PDR, Myanmar and Singapore have significantly increased their energy intensity.

ASEAN Energy Efficiency Trends (2010-2017)



Low Hanging Fruit: Sustainable Cooling provides significant opportunities for addressing Equity and Energy Efficiency in Asia

Cooling Access: Populations at Risk in Asia

Rural Poor: **Approximately 109 Million**

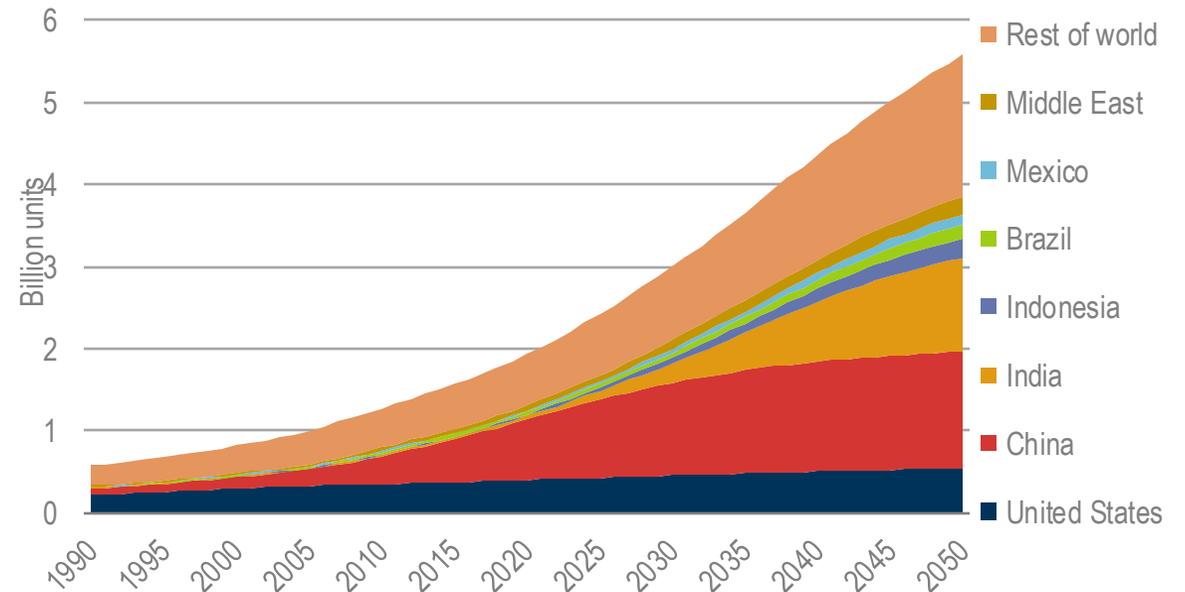
Urban Poor: **Approximately 484 Million**

Lower-middle Income: **Approximately 1.8 Billion**

Cooling Access issues for Health and Productivity

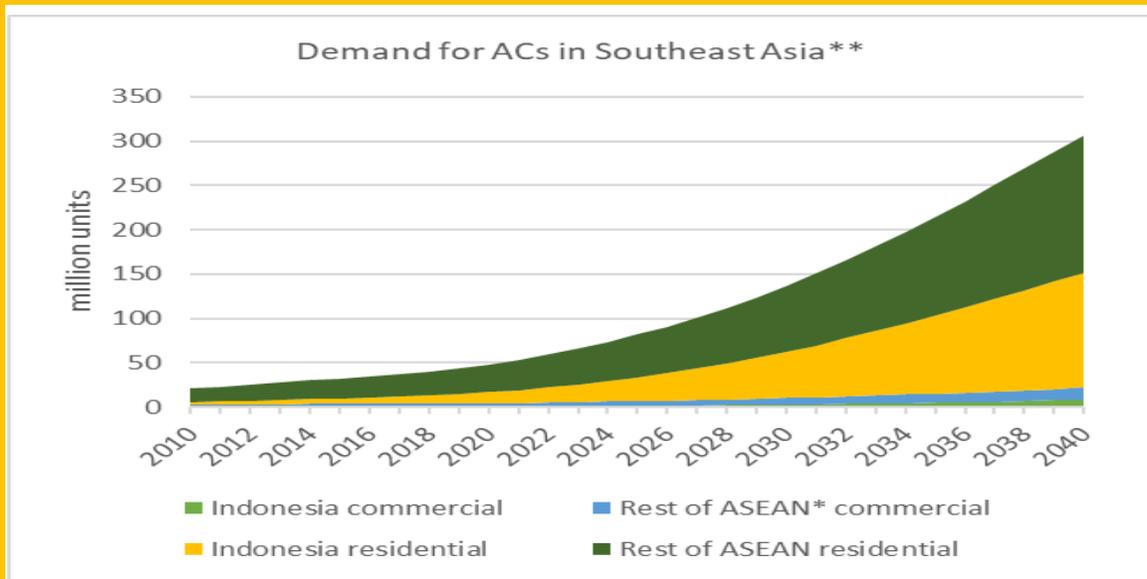
- **USD 630 billion of annual economic loss due to heat stress and 59 million full-time jobs lost in Asia.**
- As the world develop vaccines to prevent future pandemics, **access to cold chains** remains essential for safely storing and transporting vaccines.

Global air conditioner stock and estimate future demand



- **By 2050, around 2/3 of the world's households could have an air conditioner. China, India and Indonesia will together account for half of the total number.**
- **Without addressing energy efficiency, energy demand for space cooling will more than triple by 2050 – consuming as much electricity as all of China and India today.**

Southeast Asia a demand hub for cooling: need to ensure sustainable cooling access

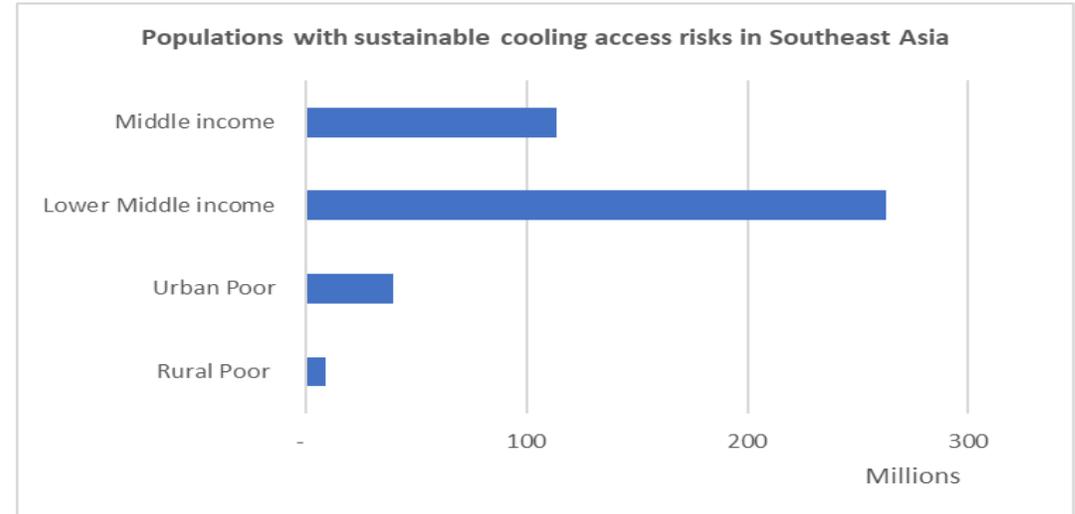


Southeast is expected to have high AC uptake

- Annual demand of 300 million units expected by 2040. Indonesia will be the major market for the AC demand in SE Asia.
- The cooling sector in Southeast Asia has significant importance and will be expected to account for 30% of the peak power demand by 2030.

Rising Middle income and Lower middle-income levels in SE Asia

- In 2018, more than 100 million middle income and 250 million lower middle-income population in SE Asia with lack of access to sustainable cooling.
- Risk of cheap and inefficient cooling solutions to be adopted by these population.



Amidst the pandemic and ongoing recovery efforts, there are opportunities to reset economies and adjust structures of development and competitiveness

The environment we face



Increased illness and mortality (from COVID-19 and other ailments)



Prolonged economic contractions and reduced output



High levels of joblessness



How to recover better with Sustainable energy for all



Rolling out economic stimulus measures and welfare programs



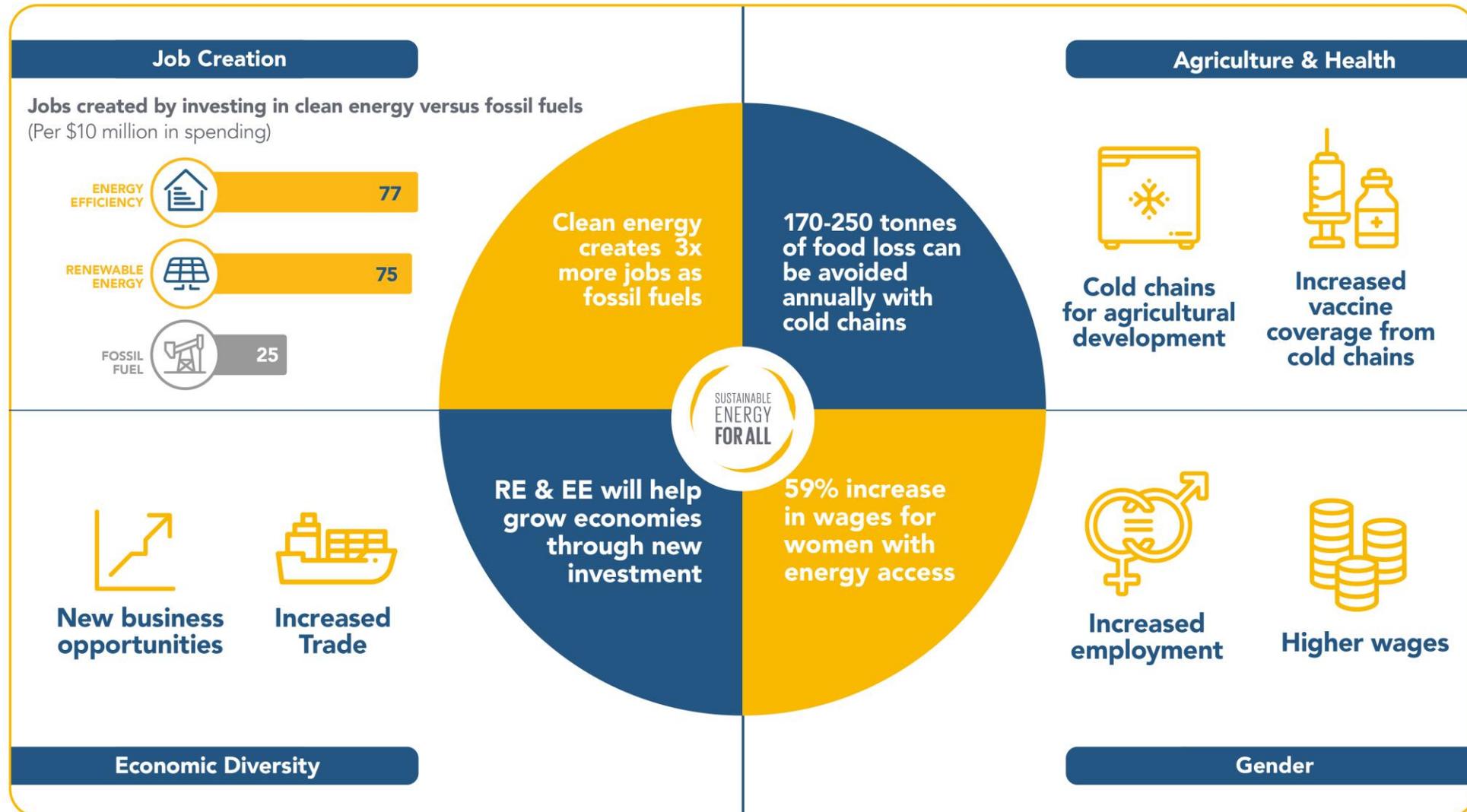
Investing in new technologies, businesses, and systems



Rethinking post-COVID economies and societies

This sustainable energy guide highlights the opportunities, benefits and enablers which will help leaders guide their countries onto a more sustainable long-term development trajectory

Prioritizing sustainable energy will provide economic, employment, commercial, health, and gender benefits to Southeast Asia governments and their citizens



Promoting investments to sustainable energy can bring added value to the economy while quickly closing access gaps

Estimated GDP impact

USD 27 billion annual investment to achieve ASEAN RE 2025 target will create an added annual GDP impact of **USD 25 billion**



- It is estimated that a **USD 400 billion energy efficiency investment potential** in Southeast Asia yet to be realized, out of which USD 152 billion represents untapped potential in the buildings sector
- The **energy efficiency interventions** for existing and new buildings could **create about 2.4 million jobs** in Southeast Asia alone.

Southeast Asia can capture further benefits by promoting regionalization of RE and EE equipment value chains

End – Users

Utilities / Power Plants



Distributed Solution Providers



Households and Businesses



GOAL:
30% of value chain localized/regionalized



Up-Stream Value Chain

Component Manufacturing/ Assembly



Solar Home Systems Panels Turbines/Blades Storage Devices Inverters Wires / Poles

Up-stream Value Chain for Energy Efficient Appliances



Fans/Refrigerators LED lighting Entertainment/Connectivity Machinery

To capture this opportunity, governments should address eight actions / reform efforts to unlock a recovery driven by sustainable energy

Promoting Ease of Doing Business

1

- Reducing number and time to obtain permits
- Reducing or eliminating import duties and taxes
- Promote entrepreneurship and cross border trade



Investing in Energy Efficiency

2

- Acknowledging investments in efficiency are the cheapest way to reduce energy demand and GHG emissions.



Enhancing Policies and Regulatory Frameworks

3

- Developing of regulatory frameworks for off-grid and on-grid development
- Empowering of Regulators / Rural Electrification Agencies



Transitioning to Cost Reflective Tariffs

4

- Allowing price for electricity to reflect the actual costs to produce and deliver energy
- Enhancing utility performance and investment attractiveness
- Providing monetary relief for poorer consumers

5

Eliminating Fossil Fuel Subsidies

- Allowing cost of fuels to reflect market prices
- Creating additional fiscal space in budgets
- Enhancing the competitiveness of renewables



Investing in Data

- Identifying of optimal sights for developments
 - Prioritizing of communities for commercial investments in electrification (“productive uses”)
 - Integrating energy planning across technologies to determine least cost connections
- Make available data that promotes investment



6

7

Declaring moratorium on new coal-fired Power

- Recognizing investments in renewables are now cheaper than investments in coal plants in major markets today.
- new investments in coal would make future coal-based power plants stranded assets.



Investing in People to Ensure Access to Jobs

- Ensuring investment in human capital to take advantage of job creation opportunities
- Building a talent pool needed as local industries are established
- Enhancing capacity of Government institutions

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