

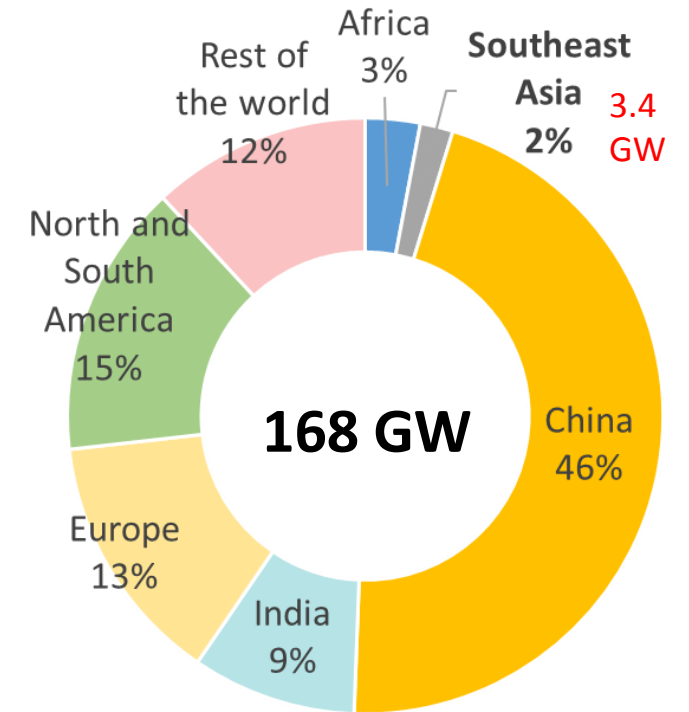
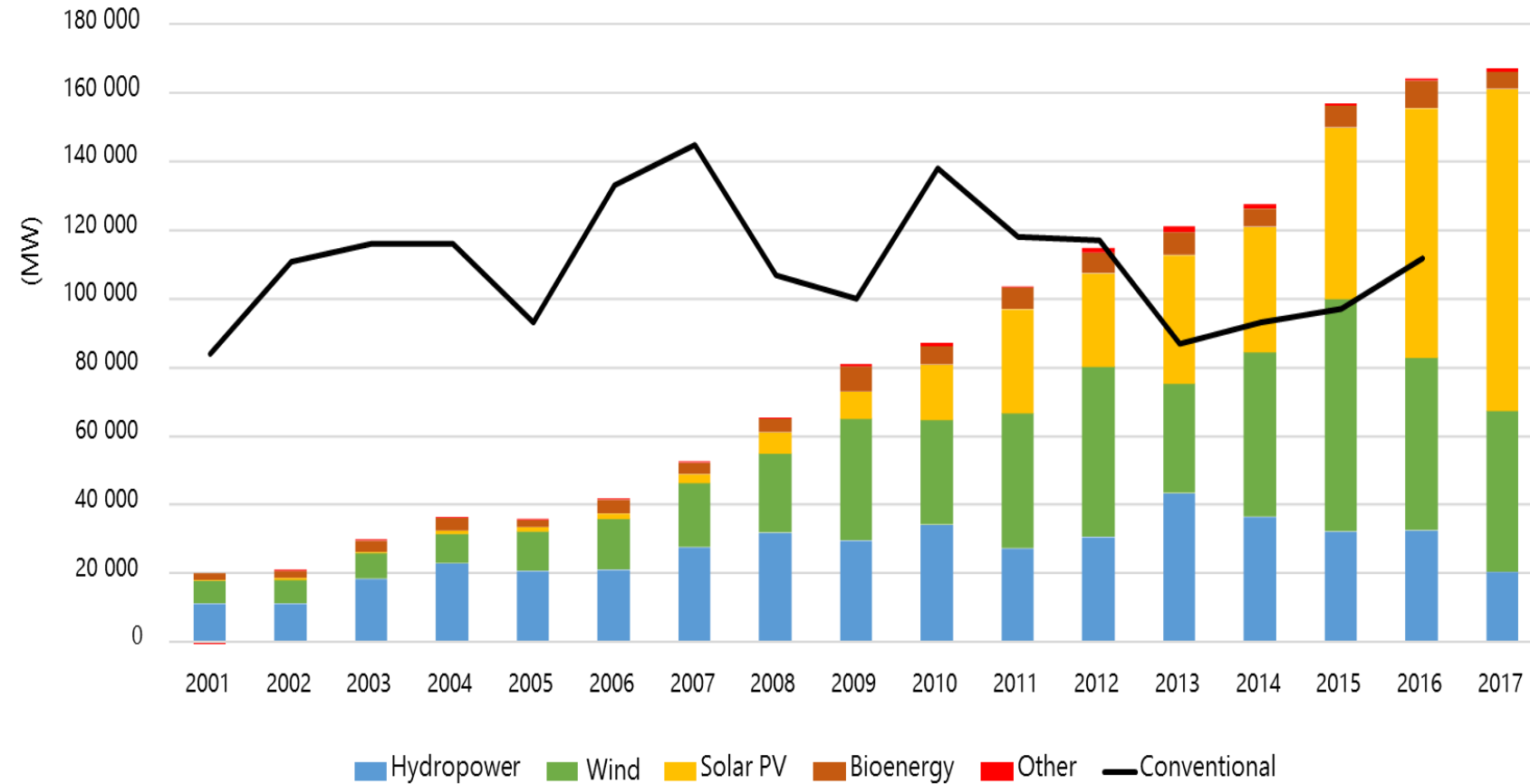
Renewable Global trends and RE Market Analysis for Southeast Asia



**Renewable Energy Policy Support Mechanism Workshop.
21-22 November 2018. Kuala Lumpur, Malaysia**

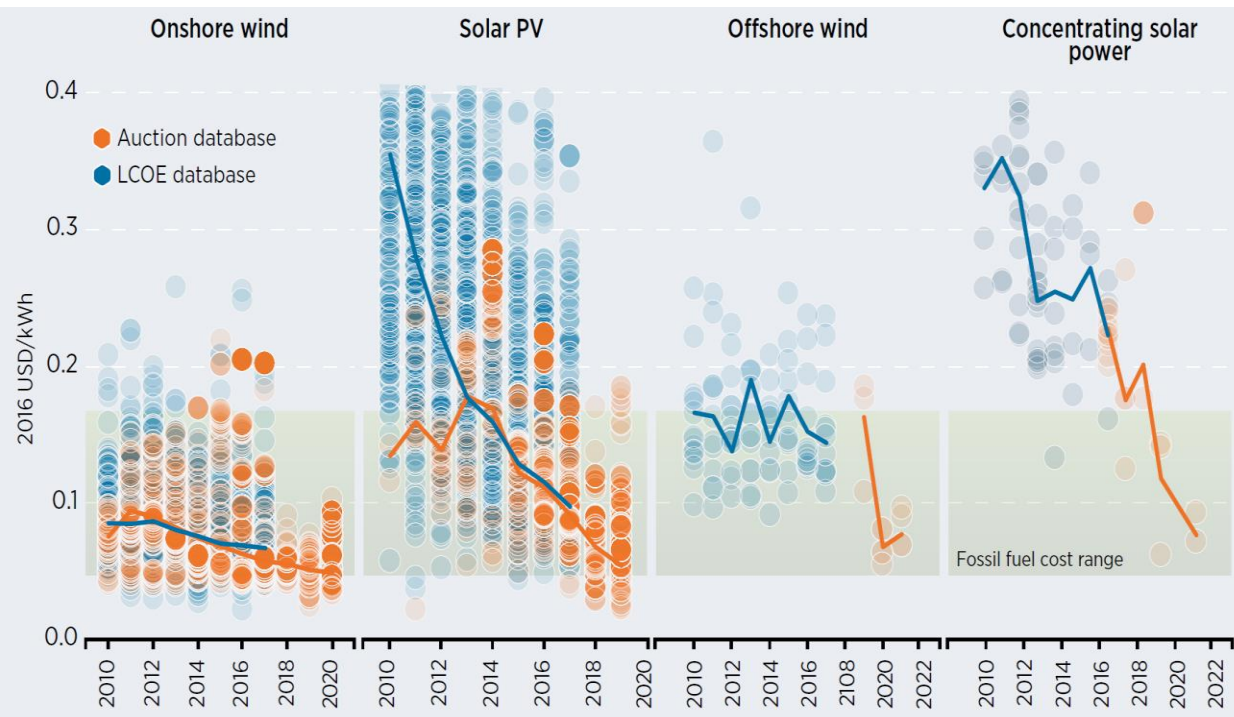
RE power capacity additions constantly exceed conventional power

Global additional RE capacity in 2017



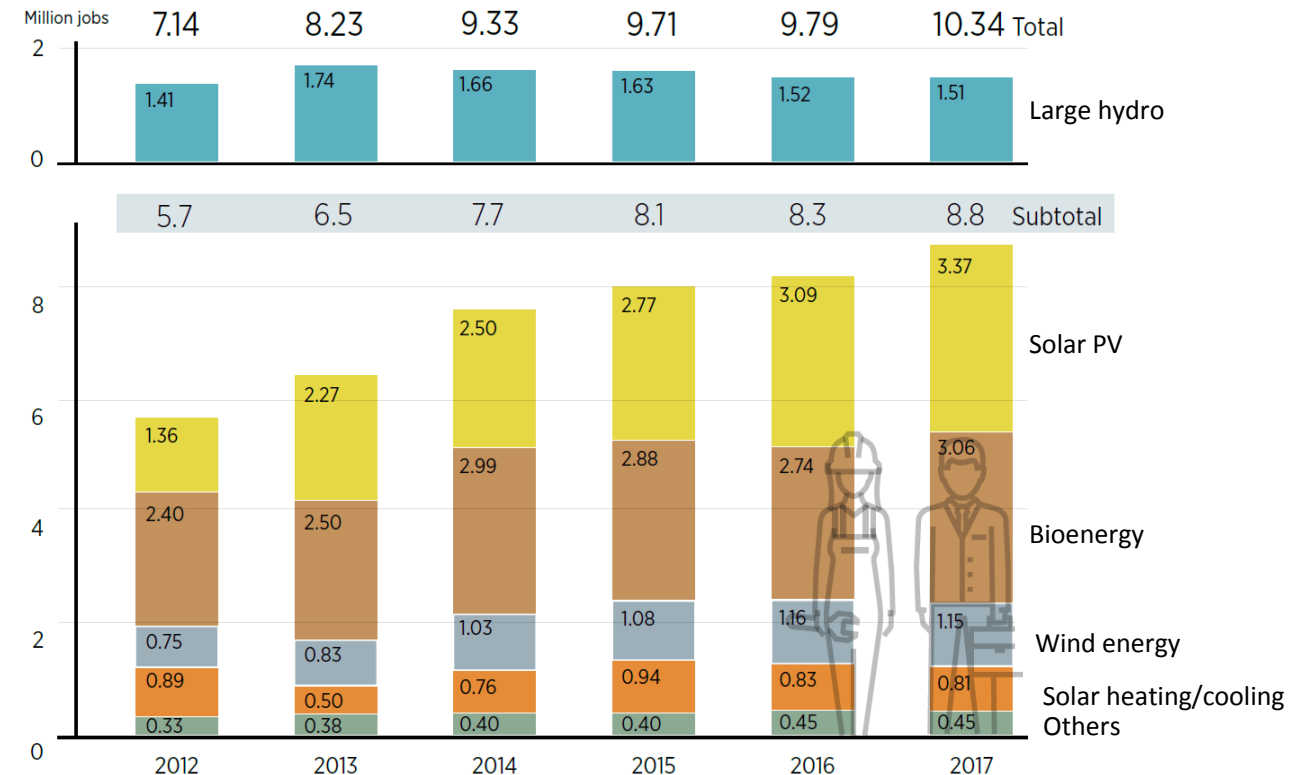
Strong business case for renewable energy

Global cost reduction including in Southeast Asia



Socio-economic benefit

10.34 million jobs globally, 611 000 in Southeast Asia

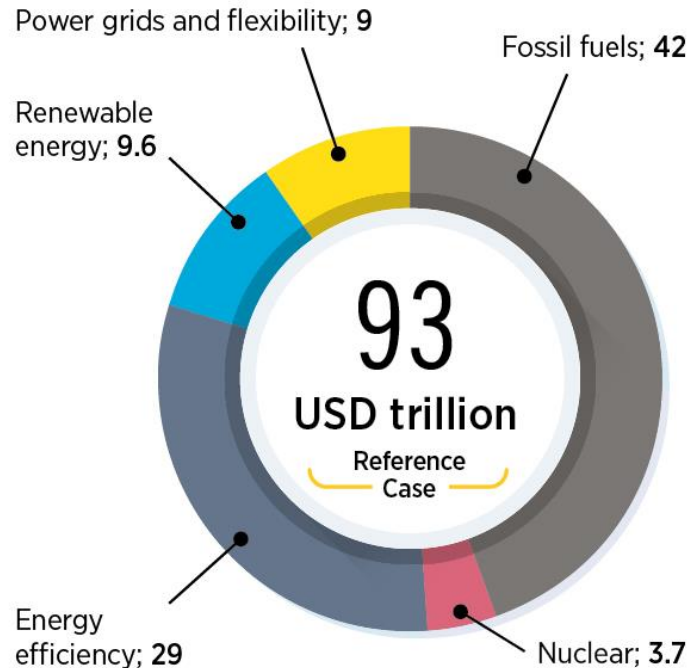


- Costs of global renewable power generation are dropping: increasing RE power is least-cost option
- The pursuit of RE development brings a wide range of socio-economic benefits

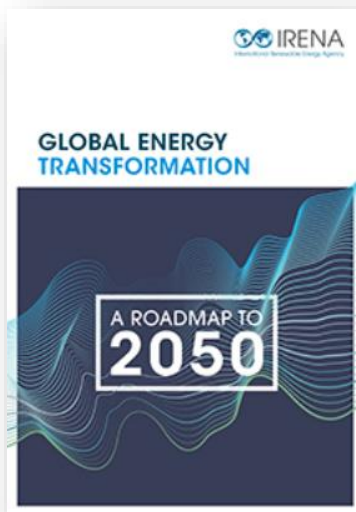
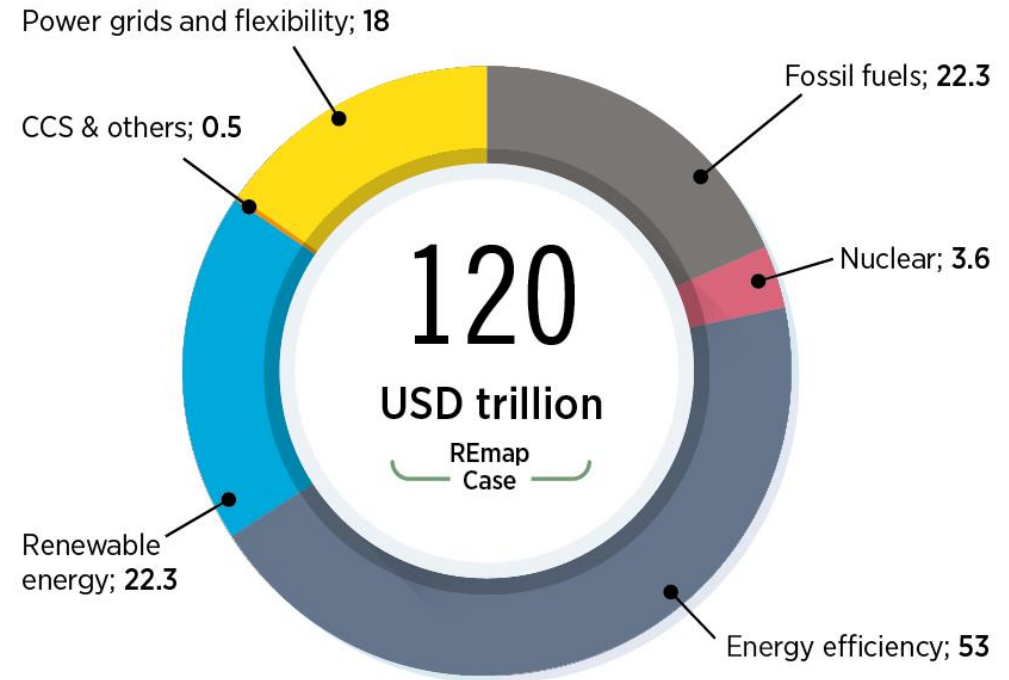
Investment will need to shift to renewable energy and energy efficiency

Cumulative investment - Reference and REmap cases, 2015-2050

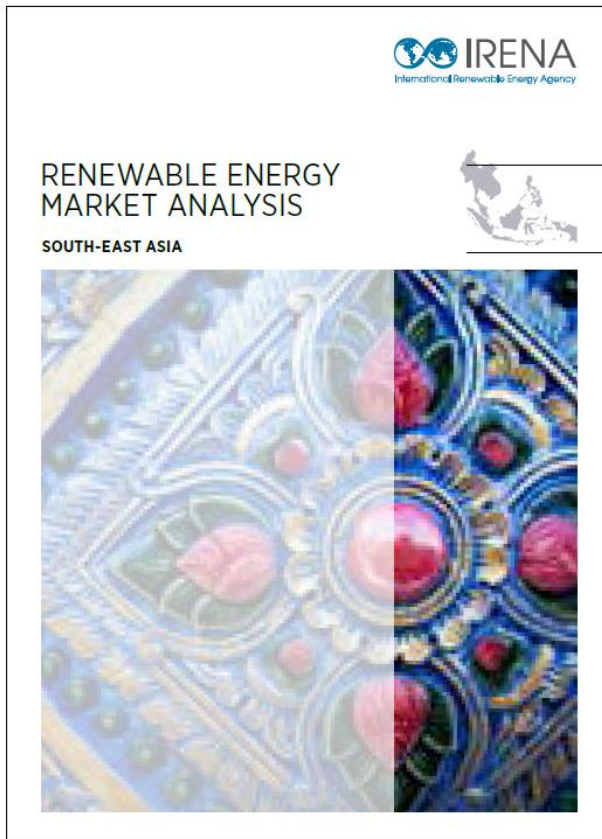
Reference Case energy sector investments between 2015-50 (USD trillion)



REmap Case energy sector investments between 2015-50 (USD trillion)



Reduced negative externalities (annual health and CO2 emissions) associated with the energy transition outweigh incremental costs by 2 to 5 times in 2050.



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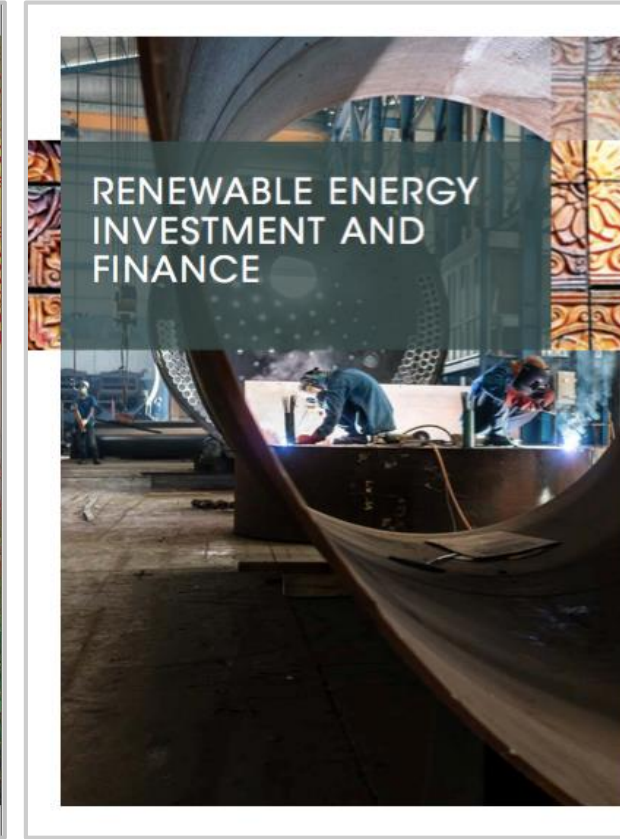
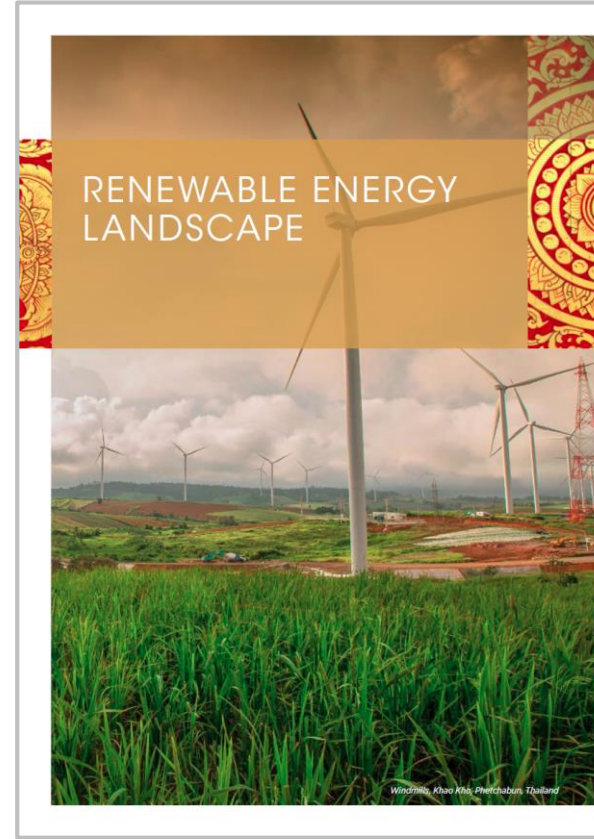
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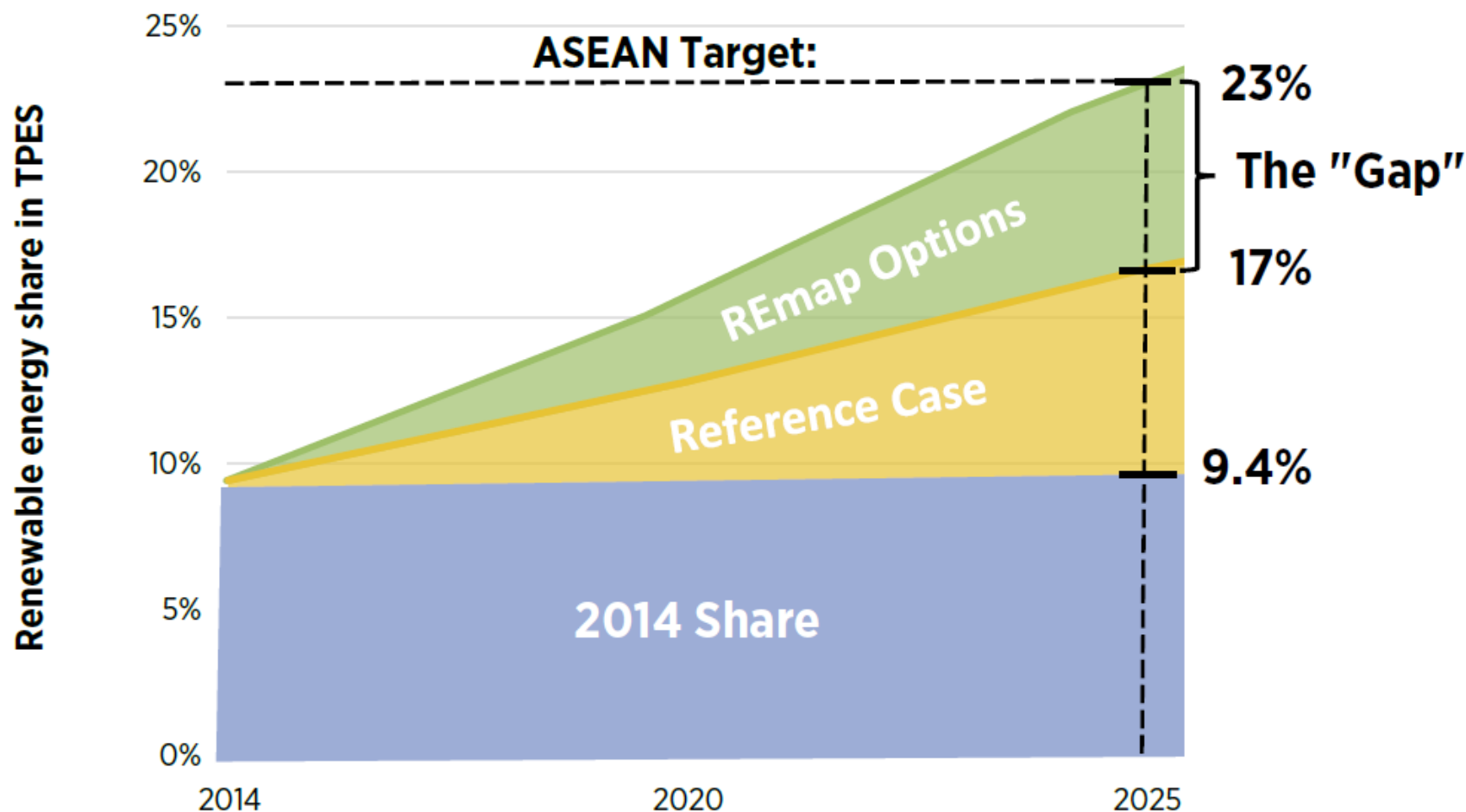
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IRENA’s latest publication **Renewable Energy Market Analysis : Southeast Asia** identifies emerging trends and themes at the intersection of public policy and market development of renewable energy

Growing renewable energy deployment which needs to be accelerate to reach the ASEAN target

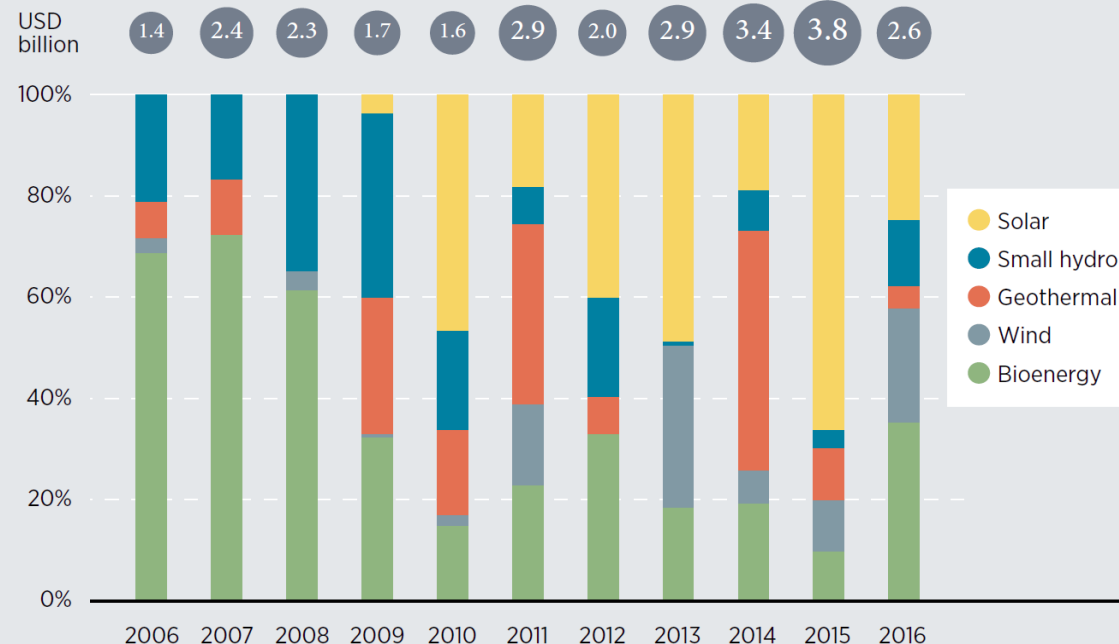
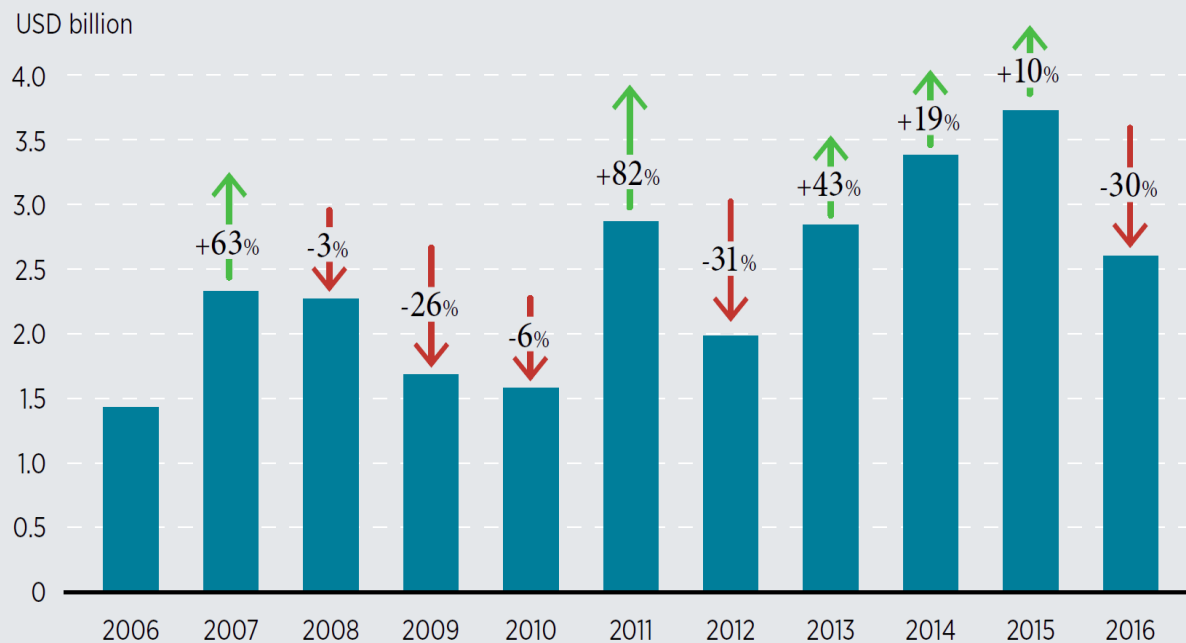


- 2025 Reference Case – 17%
- A 6% point gap to the 23% target
- REmap Options identified how to close this gap in consultation with the ten ASEAN Member States: notably solar PV, solar thermal, bioenergy
- Significant health and climate benefits under REmap options

Long-term investment trend in Southeast Asia

Investment in RE in the power sector, 2006-2016 (USD billion)

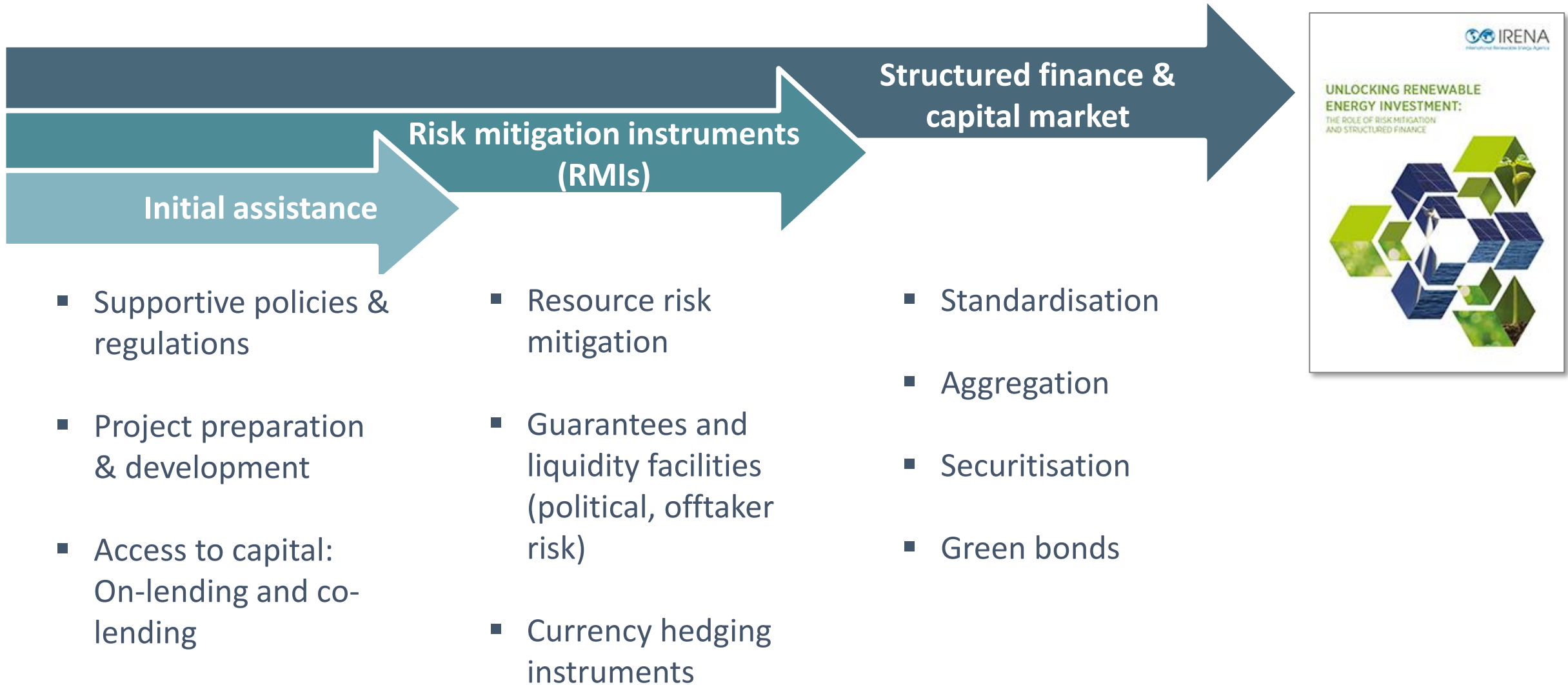
Note: based on power sector asset finance data for Indonesia, Malaysia, the Philippines, Singapore and Vietnam



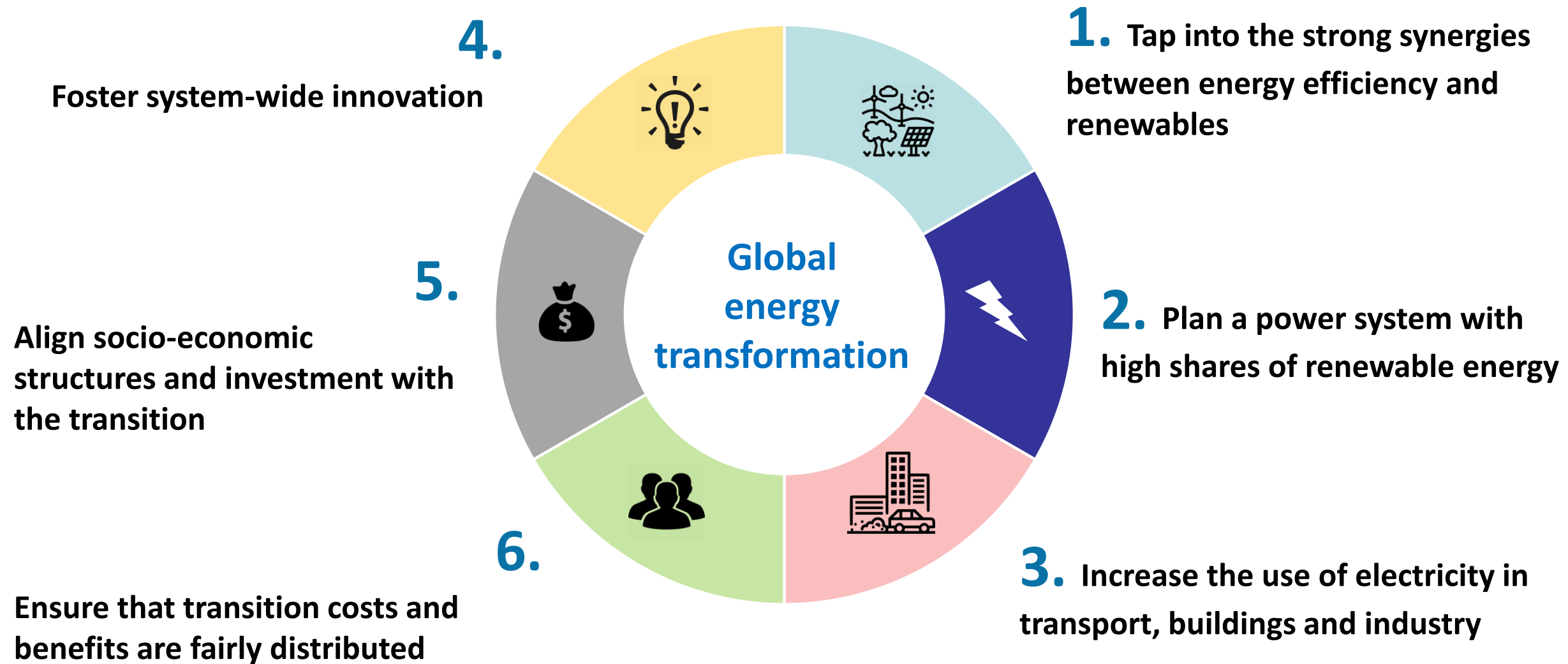
- **USD 27 billion** invested in renewable power in **2006-16**. **USD 2.6 billion** in 2016.
- Small market → **Large swings** in annual investments.
- **1%** and **2%** of global and Asia-Pacific renewable investments, respectively.

- **Main technologies 2006-2016:** (i) Bioenergy (32%); Solar PV (27%); (iii) Geothermal (16%); (iv) Hydropower (14%)
- **USD 290 billion needed** to reach the **23%** target by 2025.
- The region will need to invest on average around **1%** per year of **GDP (~27 billion USD)**

Opportunities to enhance RE investment



Key focus areas to foster the energy transformation



ASEAN-IRENA Cooperation - MoU and Action Plan

Signed on 30 October 2018 at AMEM in conjunction with Singapore International Energy Week

Strategic

Strengthened dialogue between ASEAN and IRENA

Areas of Cooperation:

Energy planning, including integration of high-shares of renewables

Assessments and roadmaps for accelerated deployment of renewables

Enabling policy and regulatory frameworks to scale up deployment

Renewable energy project facilitation support

Capacity Building as a cross cutting priority

Renewable energy technology assessments











To know more about the **Global Energy Transformation**, this and other IRENA publications are available for download from www.irena.org/publications

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