

ENERGY TRANSITION PATHWAYS FOR THE 2030 AGENDA IN ASIA AND THE PACIFIC

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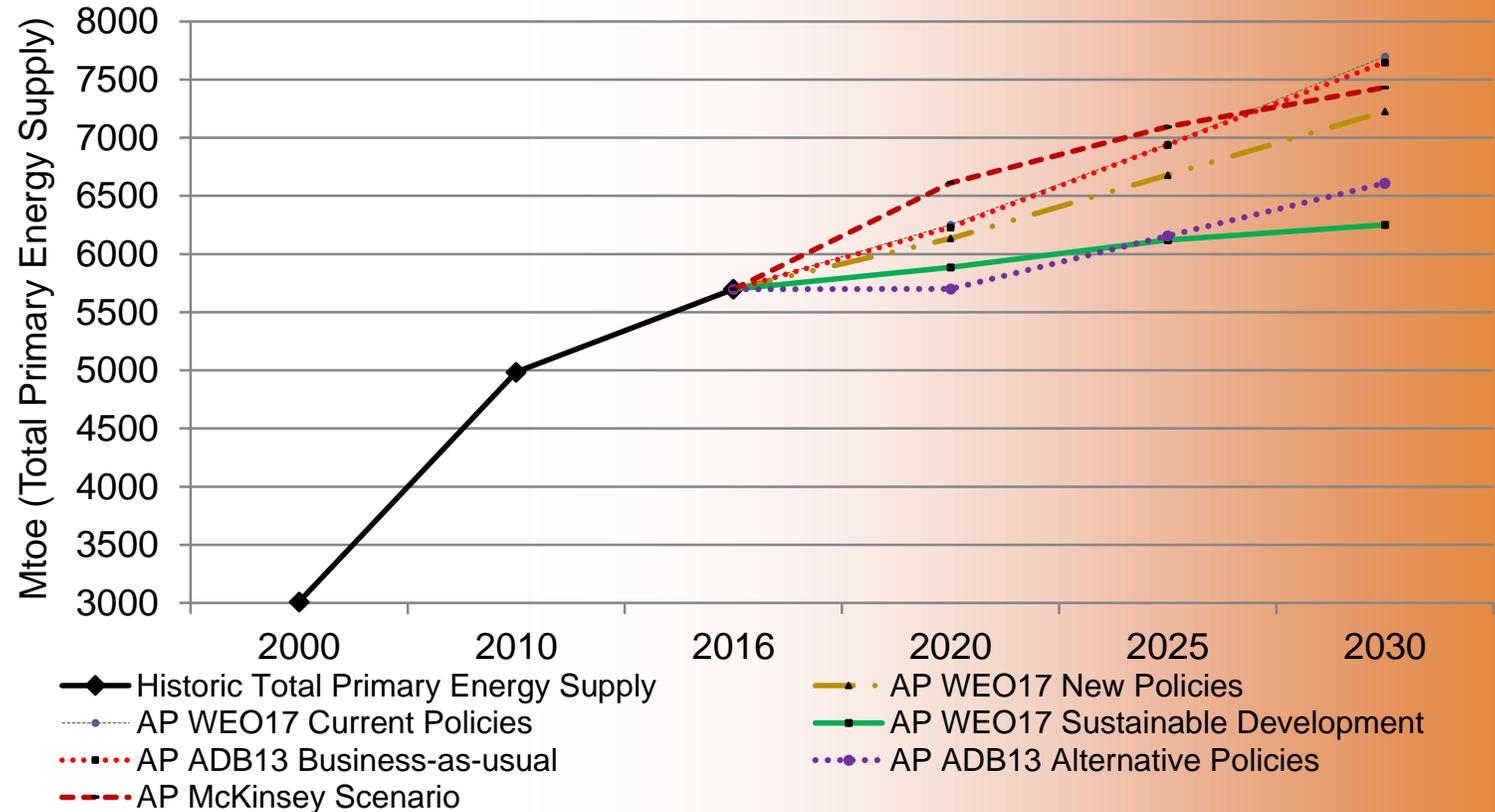
Objectives and progress of the energy transition in Asia and the Pacific

- **Asia-Pacific policy-makers face three interlinked challenges:**
 - Matching a growing energy demand with adequate supply;
 - Achieving the targets of SDG7
 - Achieve the emissions targets set under the NDCs
- **Mixed progress in Asia-Pacific region**
- SDG7 has important linkages with other development goals

Energy transition is a long-term effort aligned with SDG7 and the NDCs – to decarbonize the energy sector, provide universal access and boost renewable energy and energy efficiency

- No up to date outlooks available for Asia-Pacific national/regional level
- Depending on policy mix, the demand outlook may differ by 25%
- Providing universal energy access will not put endanger achievement of other targets – adding only 0.23 % to global energy demand

Comparison of different outlooks for Asia and the Pacific



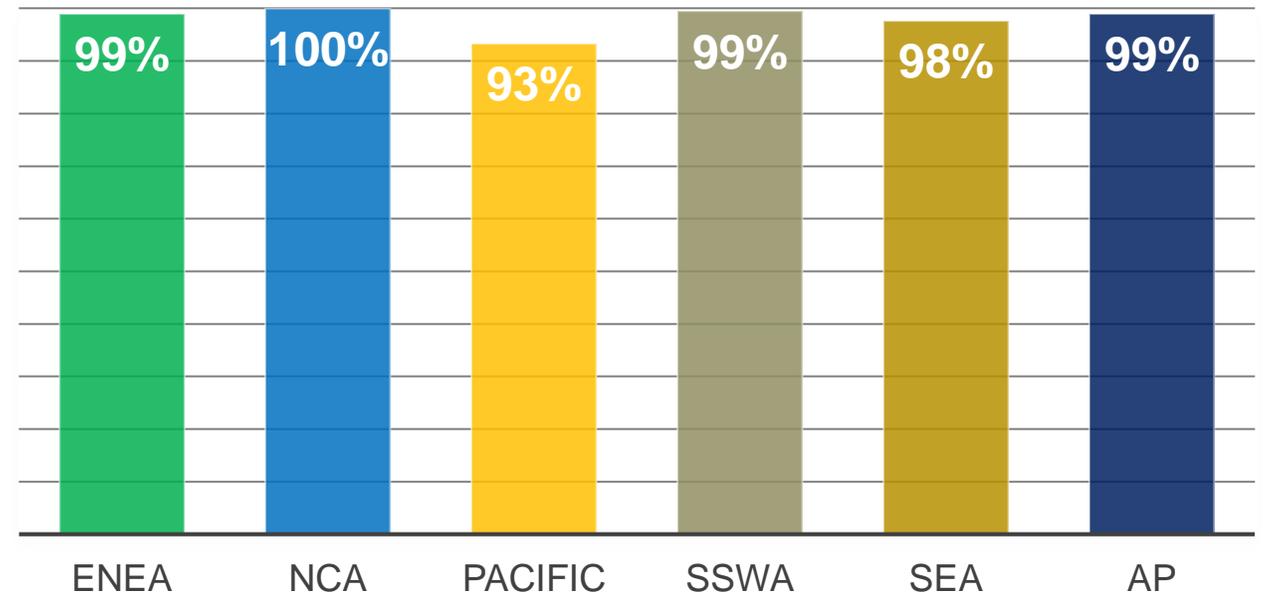
Source: ESCAP compilation from IEA (2017a), ADB (2013) and McKinsey (2017). Historic TPES = actual observed values

Better forecasting capacity at regional level is needed to underpin national strategies to set the region on track for the energy transition

Outlook for universal electricity access in Asia-Pacific: A small but significant gap remains

- Existing/planned policies set the region on track for 99% electrification by 2030
- However, this still leaves a gap with SDG7 - 93 million people without electricity access
- This projection does not take into account the quality of access
- The tier framework proposed by the World Bank could allow key statistics to be captured covering hours of electricity, reliability and other factors

Access to electricity across sub-regions in the current policy scenario by 2030

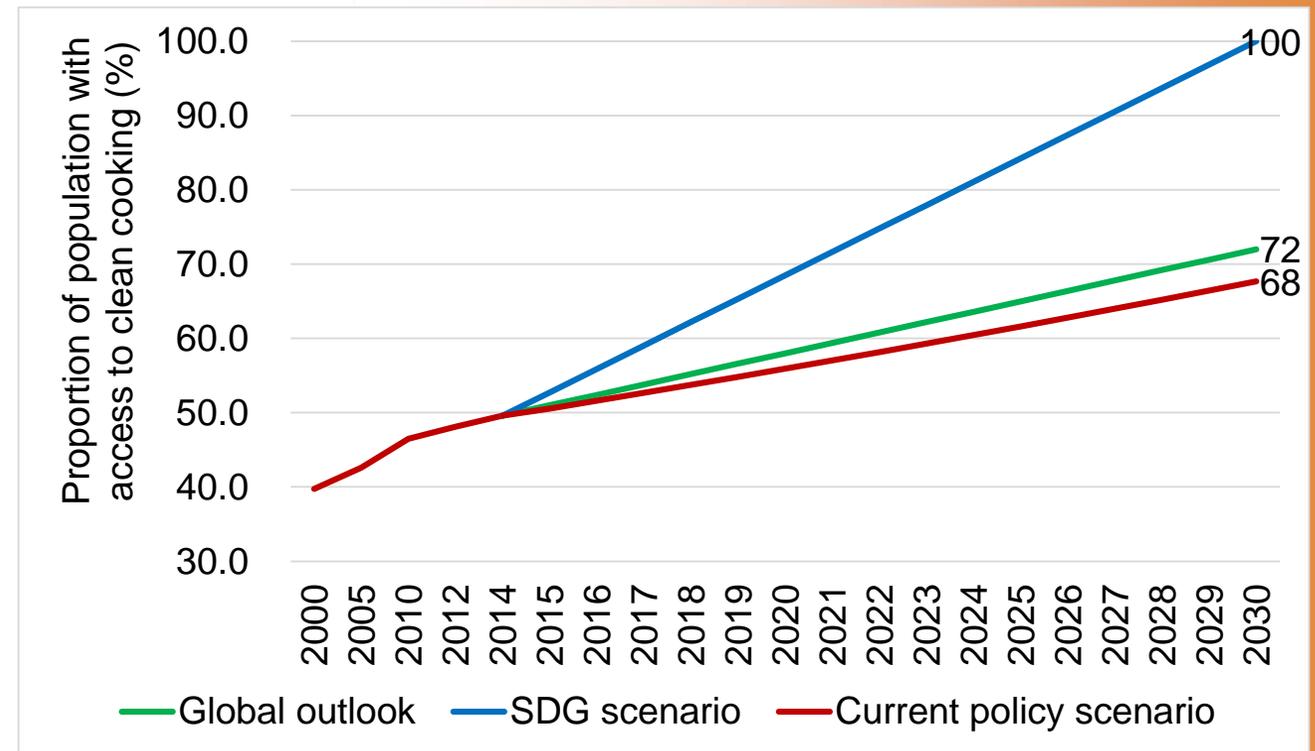


Source: ESCAP analysis

Investment of between \$0.33 billion and \$1.7 billion annually is needed to achieve the SDG7 target for universal access to electricity by 2030

- Estimates are that access to clean cooking will reach 68% by 2030 – in the absence of additional policy measures in ESCAP member States
- This leaves 1.6 billion people that will continue to rely on traditional biomass for cooking – a large gap with the SDG7 target of universal access
- Logistical and technological challenges need to be solved to provide clean cooking options

Pathways to universal access to clean cooking by 2030 (global and Asia-Pacific)

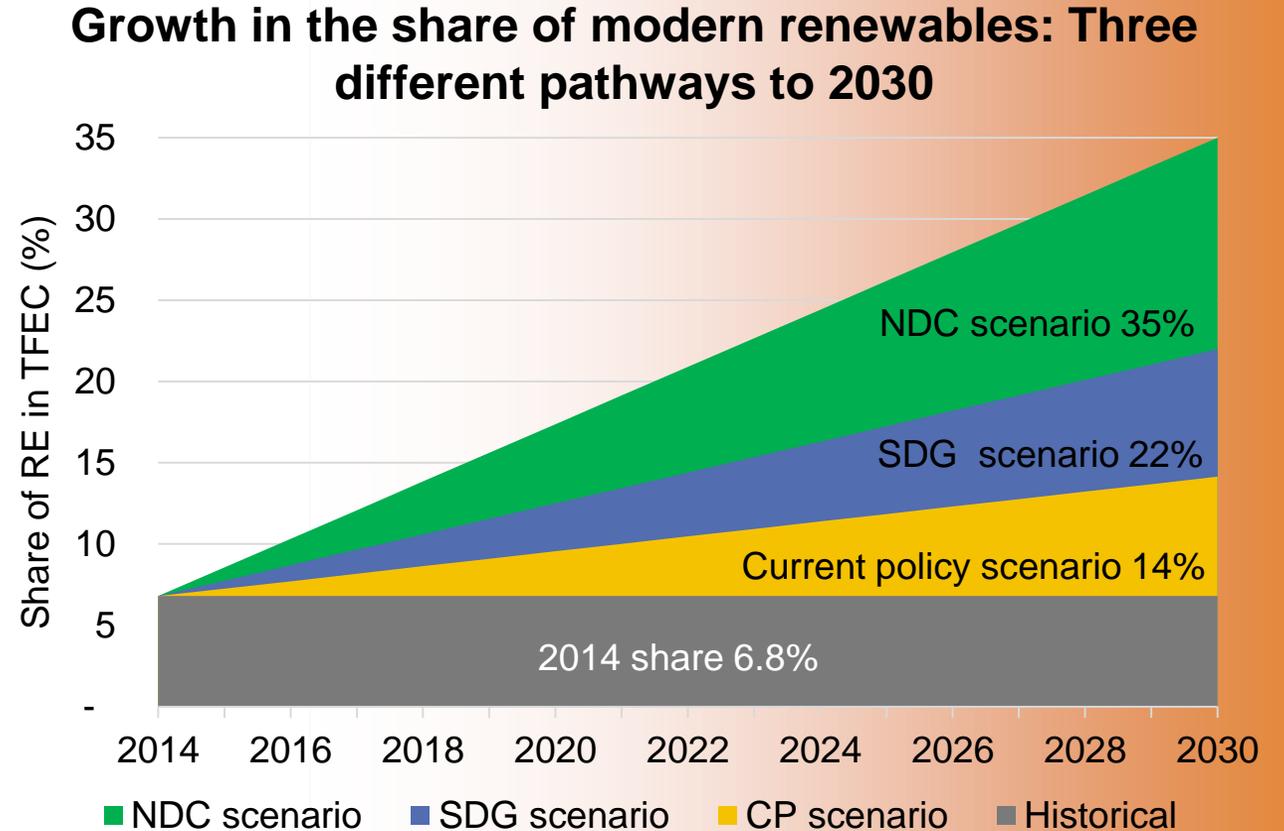


Source: ESCAP analysis

Determined action is required to bring the target on clean cooking systems back on track which requires exploring locally appropriate solutions

Outlook for renewable energy in Asia-Pacific: Achievements to come but more efforts are needed

- Under the current policies scenario, the share of renewable energy (including traditional biomass) will decline by 2030
- With existing and planned policies, the region will reach 14% of modern renewable energy in the energy mix – up from 7% now
- For the SDG7 scenario, a 22% modern renewable energy share is required
- Even more has to be done to achieve current NDC commitments – the share of modern renewable energy would have to grow to 35%

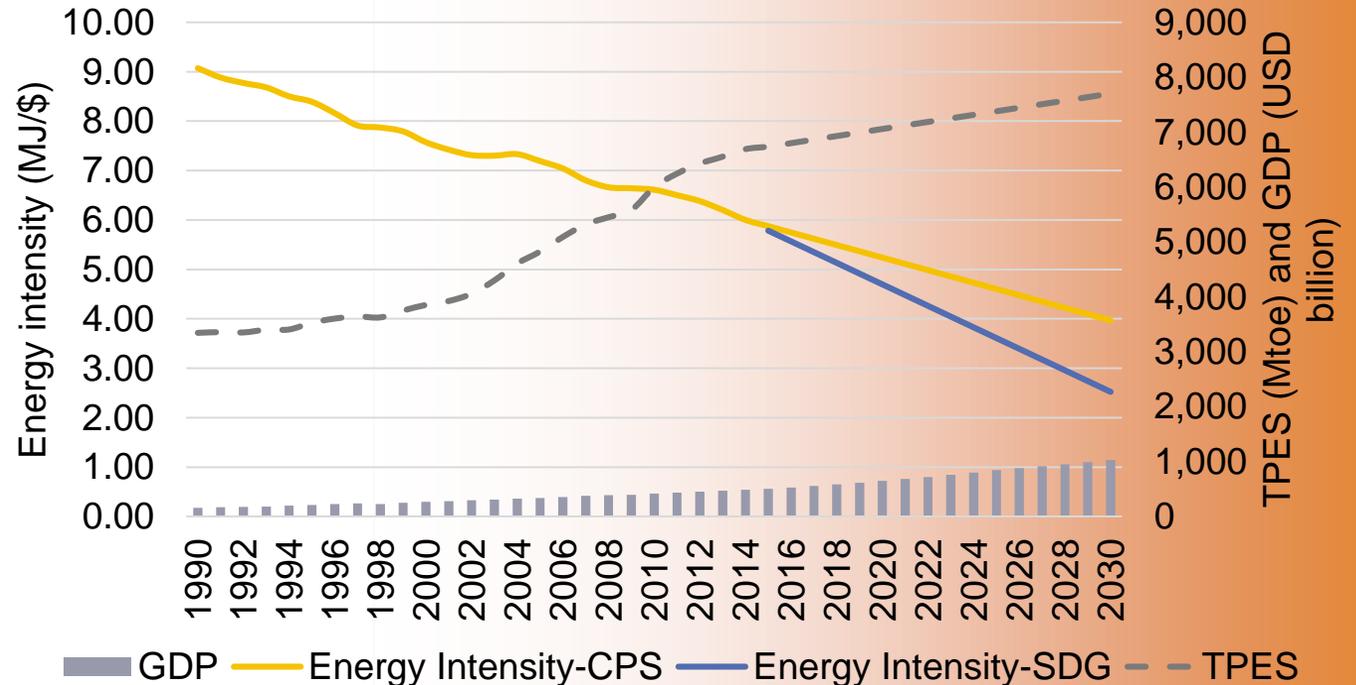


Source: ESCAP analysis

Achieving the SDG7 target means speeding up the deployment of modern renewable energy, across the region

- Under the current policies scenario, energy intensity reaches 3.97 MJ/\$ in 2030
- Short of doubling the rate of energy efficiency improvement by 2030 which requires reaching 2.52 MJ/\$
- Faster progress is possible: several Asia-Pacific countries far outperformed the regional trend
- Good understanding of the structure of the local energy system is needed to determine priority areas of intervention

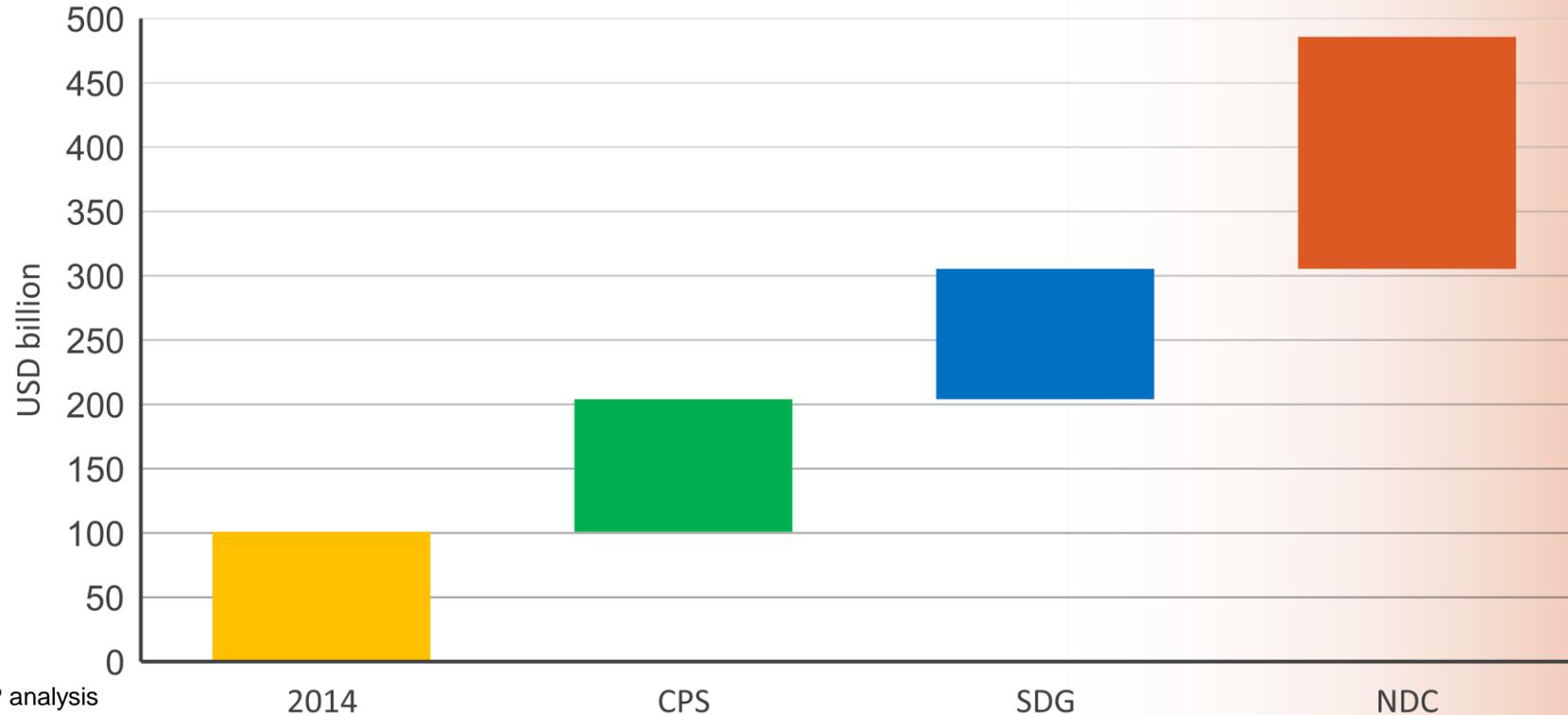
Energy intensity under the current policies scenario is close to the SDG7 target in 2030



Source: ESCAP analysis

Energy efficiency needs decisive action as a key element of the energy transition.

Incremental investment in renewable energy for different scenarios and shares



Source: ESCAP analysis

Policy frameworks need to align with SDG7, in particular fossil fuel subsidies need to be revised. An Energy Transition Roadmap tool could assist this effort

Key policy recommendations for policy makers for the energy transition in Asia and the Pacific

- Alignment of national energy policy with the SDG7 and NDC targets needed
- Development of an energy transition roadmap
- Develop business and technology models for universal access to energy
- Levelling the playing field for renewable energy
- Accelerating renewable energy growth through regional energy connectivity
- Leveraging the synergies between renewable energy and energy efficiency

The energy transition requires a change the paradigm of designing and managing energy systems towards a holistic approach aligned with SDG7 and the NDCs