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

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Economic and Social Commission for Asia and the Pacific

Objectives and progress of Energy Transition

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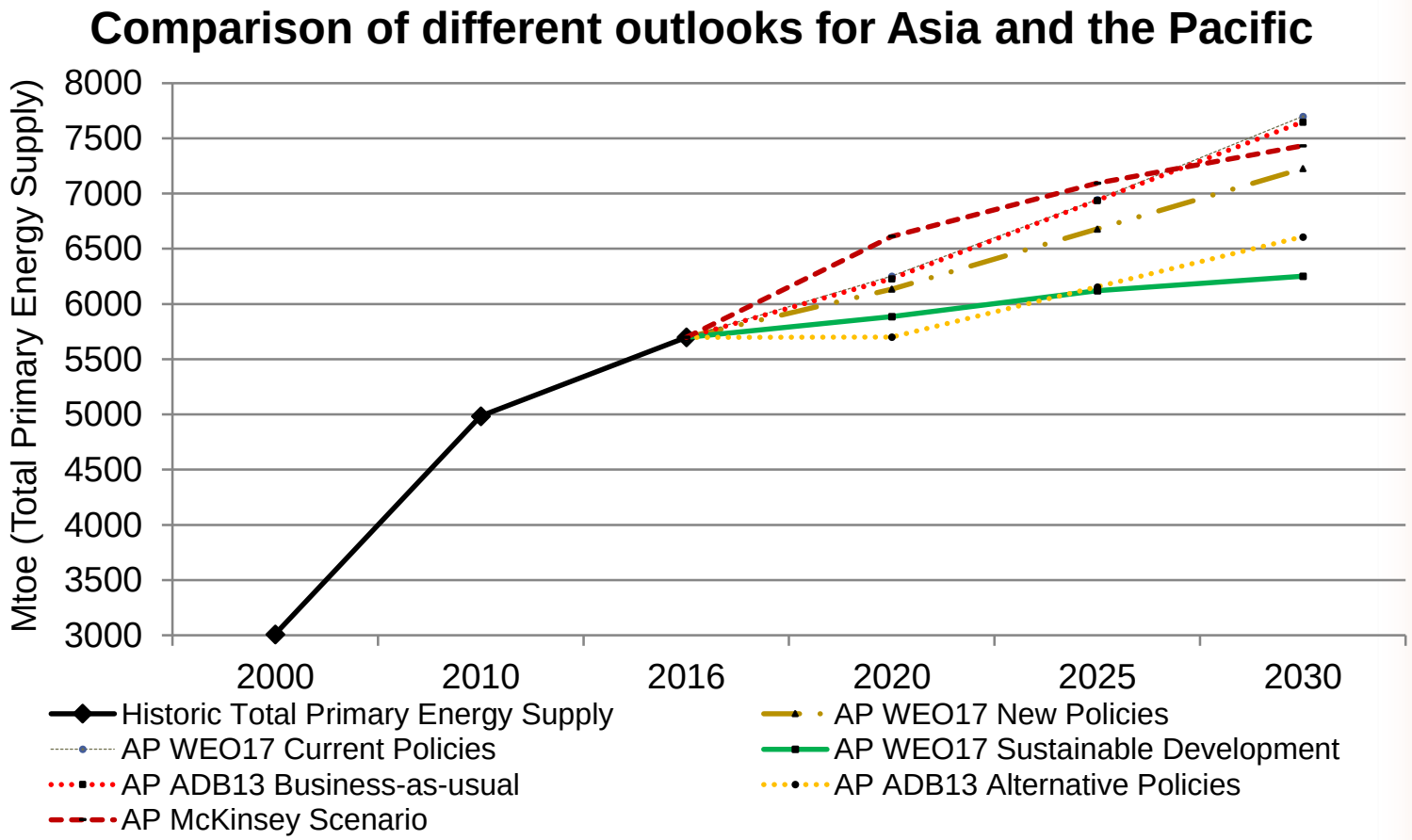
- **Asia-Pacific policy-makers face three interlinked challenges**
  - Matching a growing energy demand with adequate supply;
  - Achieving the targets of SDG7
  - Reduction of the GHG emissions through NDCs under Paris Agreement
- **SDG7 2030 targets:** Energy Access, Renewable Energy, Energy Efficiency
  - Mixed progress in Asia-Pacific region
  - SDG7 has important linkages with other development goals

Energy transition is a long-term effort aligned with SDG7 & the low carbon development of the energy sector, provide universal access and boost renewable energy and energy efficiency

Energy demand outlook for Asia and the Pacific

- 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

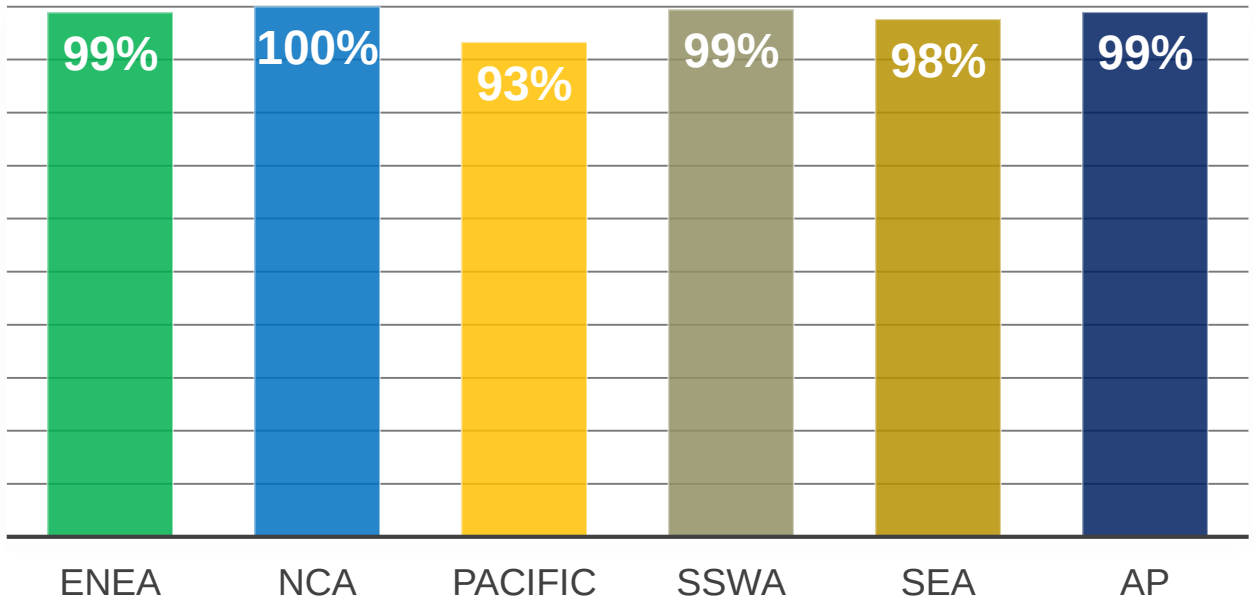


Source: ESCAP compilation from IEA (2017a), ADB (2013) and McKinsey (2017). Historic TPES = actual observed values

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

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

Access to clean cooking systems in Asia-Pacific
Decisive action is required without further delay

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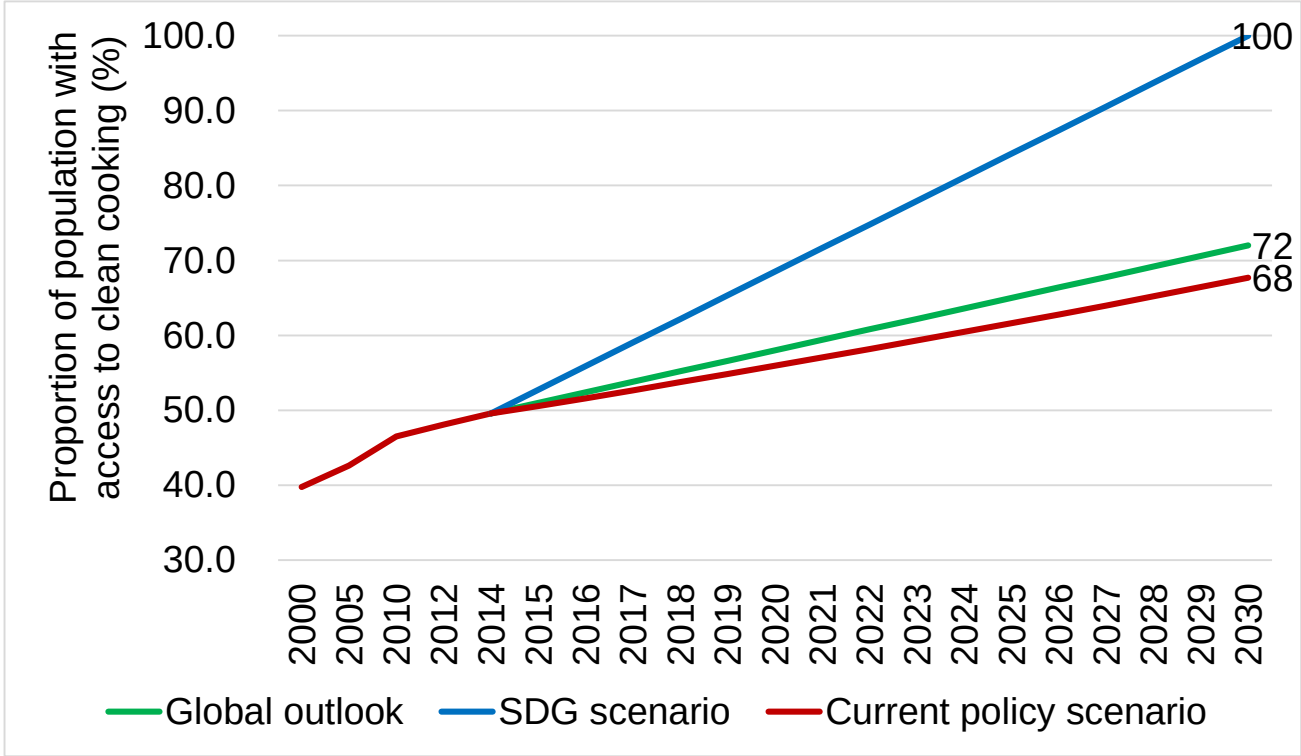
- Estimates are that access to clean cooking will reach 68% by 2030 – in the absence of additional policy measures in ESCAP member States
- This leaves 1.6 billion people that will continue to rely on traditional biomass for cooking – a large gap with the SDG7 target of universal access

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

Renewable energy in Asia-Pacific: Achievements to come but more efforts are needed

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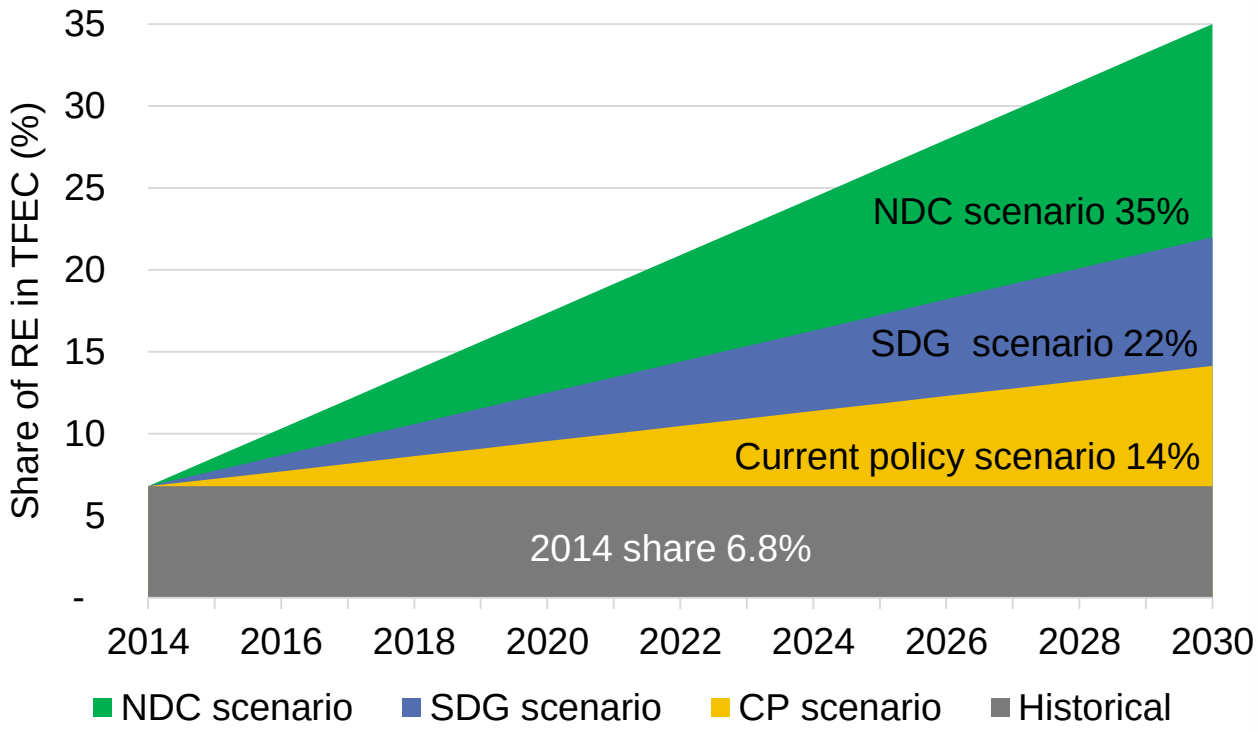
- Under the current policies scenario, the share of RE (including traditional biomass) will decline by 2030
- With existing and planned policies, the region will reach 14% of modern RE in the energy mix – up from 7% now
- For the SDG7 scenario, a 22% modern RE share is required
- To achieve current NDC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

Growth in the share of modern renewables: Three different pathways to 2030



Source: ESCAP analysis

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

Energy intensity in Asia and the Pacific
The enabler of the energy transition requires more attention

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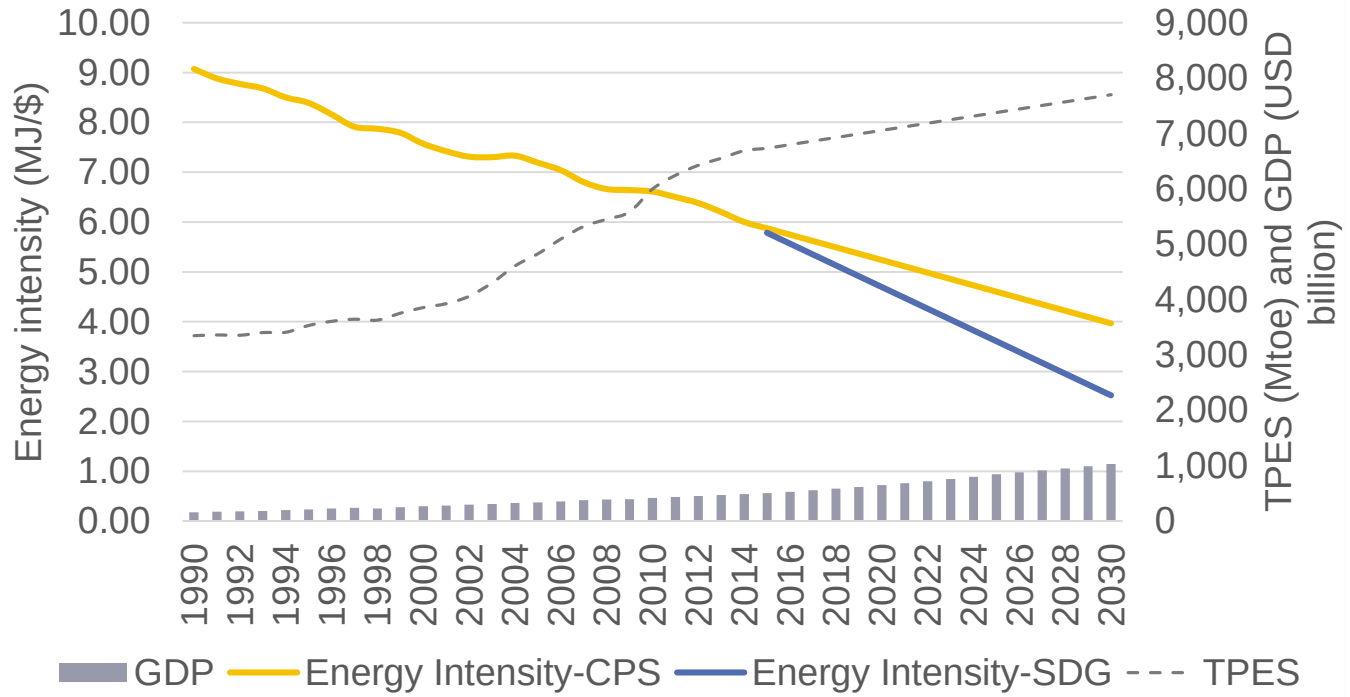
- Under the current policies scenario, energy intensity reaches 3.97 MJ/$ in 2030
- This falls short of doubling the rate of energy efficiency improvement by 2030 which requires reaching 2.52 MJ/$
- Faster progress is possible
- Good understanding of the structure of the local energy system is needed 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.

Connectivity as an effective and efficient accelerator for Sustainable Development Goal 7

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Energy connectivity to enhance

- energy security
- meet projected energy demand
- address gaps in energy access, and
- create a decarbonized energy system
- regional economic cooperation and integration

Energy connectivity includes

- trade and exchange of energy in multiple forms
- power sector presents the greatest opportunities for harnessing the benefits of connectivity

Regional roadmap needed to facilitate cross-border electricity connectivity

Key Policy recommendations for the energy transition

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- **Alignment of national energy policy with the SDG7 and NDCs 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**
- **Develop a regional roadmap on power grid connectivity**

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