Energy Efficiency Financing Mechanisms in Asia and the Pacific

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ESCAP Energy Division

Mission Statement:

"To ensure access to affordable, reliable, sustainable, and modern energy for all in Asia and the Pacific; and to enhance energy security and connectivity by promoting regional cooperation, using the means of intergovernmental process, research, and capacity building".

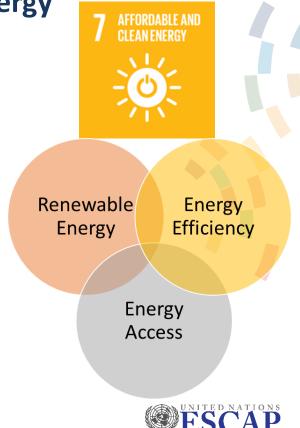
Within this scope, we support our member states in:

- Providing a platform for intergovernmental dialogue and knowledge exchange.
- Energy research, data and knowledge sharing to support evidence-based policy, including through the Asia Pacific Energy Portal
- Capacity Building



Elements of Sustainable Development Goal 7 – a transition to sustainable energy

- **Target 7.1.** "By 2030, ensure universal access to affordable, reliable and modern energy services." Two components:
 - -access to electricity;
 - -access to clean cooking fuels and technoligies.
- Target 7.2. "By 2030, increase substantially the share of renewable energy in the global energy mix".
- Target 7.3. "By 2030, double the global rate of improvement in energy efficiency", measured by energy intensity - ratio of total primary energy supply to GDP.



Asia Pacific SDG Outlook – Electricity Access

Goal 7.1.1: 100% Electrification by 2030

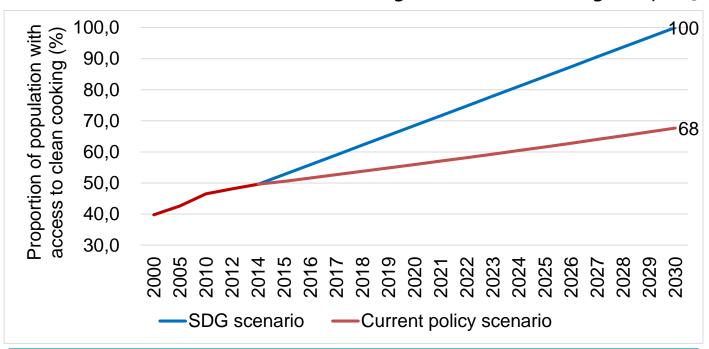


Gap: 1.3% (63 million people) will remain without electricity access in 2030 based on current policies



Asia Pacific SDG Outlook – Clean Cooking

Goal 7.1.2: 100% access to clean cooking fuels and technologies by 2030



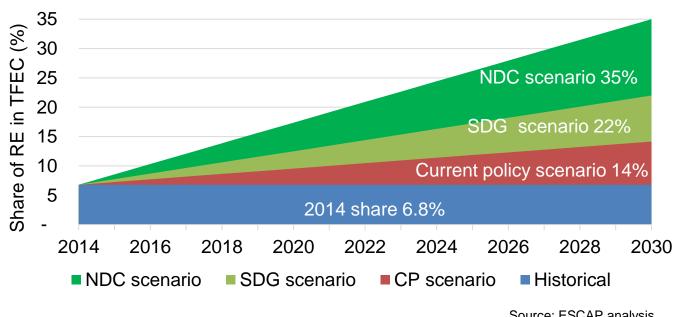
Gap: 32% (1.6 billion people) will remain without access to clean cooking in 2030 based on current policies





Asia Pacific SDG Outlook – Renewable Energy

Goal 7.2: Increase share of renewable energy to 22%



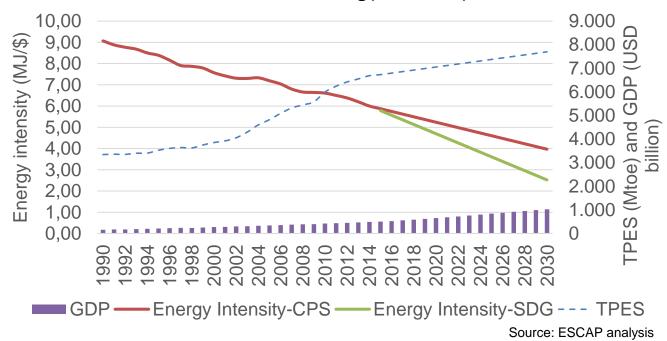
Source: ESCAP analysis

Gap: RE is projected to reach only 14% by 2030 leaving a gap of 8 percentage points.



Asia Pacific SDG Outlook – Energy Efficiency

Goal 7.3: Reduce energy intensity to 2.5MJ/\$

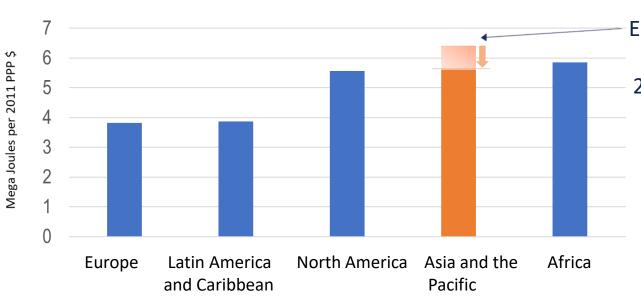






2012-2015 Results: Energy efficiency

Energy Intensity of Global Regions 2015



Energy intensity improved by 11.8% over between 2012-2015 for Asia and the Pacific



Energy intensity has fallen but Asia and the Pacific remains among the highest global regions

Policy options to enable the energy transition

Policy and planning

and

SDGs

other

with

of SDG7

Analyse interlinkages

energy scenario

reassess

• Incorporate 100% electrification by 2030 in energy policy

• Incorporate 100% clean cooking by 2030 in energy policy

· Disaggregate regional target to national levels

· Incorporate national target in energy policy

 Estimate historical changes in energy intensity

· Incorporate twice the rate in energy policy by 2030

MOE, MOF, investors, research institutes. business community

Technology prioritisation

- RE-based mini-grid for high load density areas
- SHSs for low load density areas
- · Biogas digester to areas with livestock
- LPGs in areas with supply network
- ICS to reach the last mile
- Feasibility study to identify suitable technologies
- · Choice will depend on locally available resources and load demand
- · Feasibility study to identify sectoral scopes
- · Use best practices guidelines to identify energy efficient equipment for industry sub-sectors

MOE, MOF, MOT, MOI, utilities, civil society groups, NGOs, investors and entrepreneurs

- Invite IPPs, SPPs, VSPPs
- · Create revolving fund to offer concessional loans
- · Capital subsidy for biogas digester
- Develop local entrepreneurs
- Improve LPG supply network
- · Long-term power purchase
- RE auction for large projects
- Public-private partnership
- Feed-in-Tariff
- Support ESCOs development
- · Promote energy performance contract model for SMEs
- · Create revolving fund to offer concessional loans

MOE, utilities, MOF, Petroleum and Coal associations, national financial institutes, IFIs, MDBs

Investment and market access Fiscal measures Regional cooperation

- Exempt import duty
- Phase out FF subsidy
- Introduce levy/ carbon tax
- Corporate tax holiday

- Develop energy transition roadmap
- Develop mechanism for national RE targets
- Regional dialogues
- Knowledge sharing
- Capacity building
- Energy connectivity/ interconnected grid
- Analyse interlinkages and develop guidelines
- Measure progress of energy transition (MRV)

Board of Investment, MOF, MOE. MOI, MOT

ESCAP, expert group, IFIs, MDBs, partners, think tanks. investors,

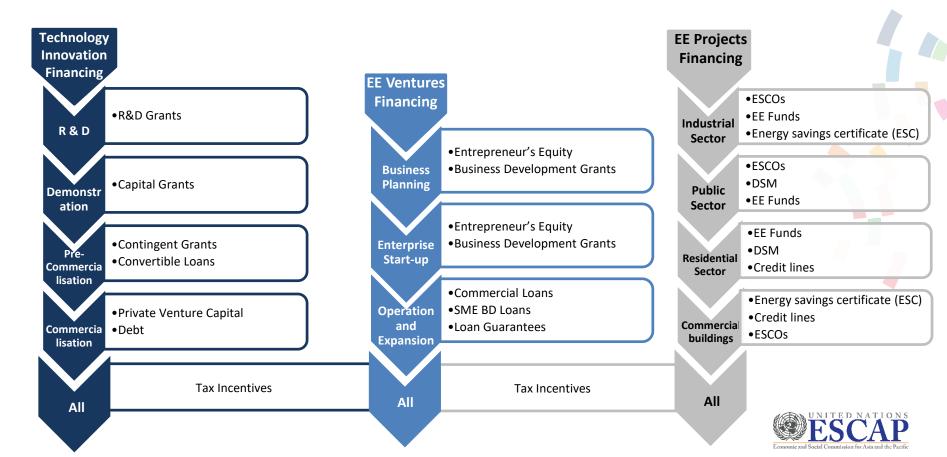


7.1 SDG

SDG

ACTORS

Energy Efficiency Financing Mechanisms



Lessons from Behavioral Economics

"The purely economic [person] is indeed close to being a social moron. Economic theory has been much preoccupied with this rational fool."

-- Richard H. Thaler, Misbehaving: The Making of Behavioral Economics

Examples in implementation:

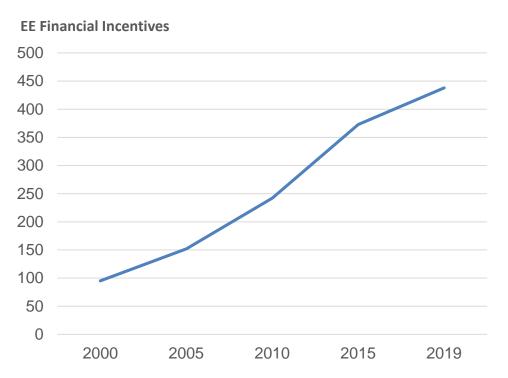
- Simplifying loan repayment: On-bill repayment
- Longer payback periods for small-scale property owners (Property Assessed Clean Energy programmes)
- Aligning split incentives, eg. Renter vs. building owner
- Positive Reinforcement, eg. Opower

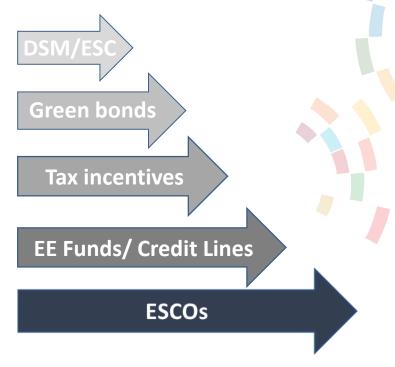






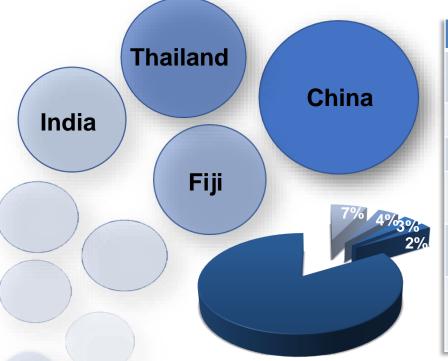
Policies in support of Energy Efficiency Financing Mechanisms in Asia and the Pacific







Top 4 countries with the greatest number of Policies supporting EE Financial Mechanisms

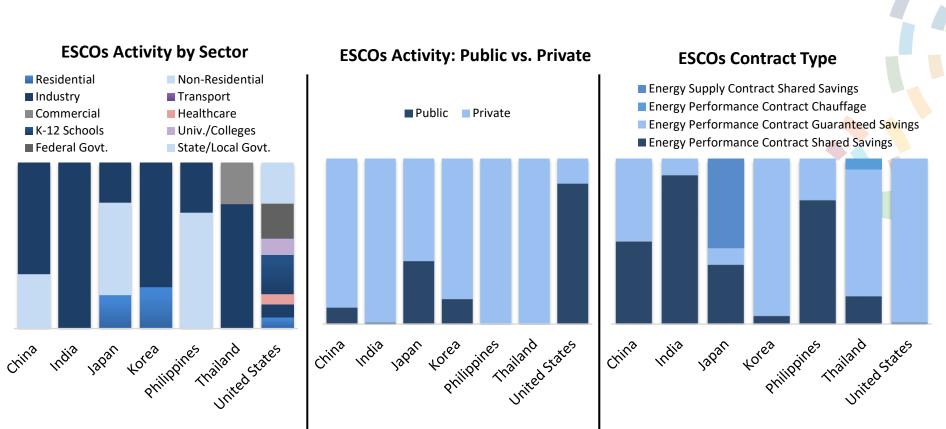


	China	Thailand	Fiji	India
Nº of policies	30	16	15	12
ESCOs	/	/	/	/
DSM/ESC	~	/		~
Tax incentives	~	✓	~	
Green bonds	~	~	~	~
EE funds/Credit lines	~		~	~



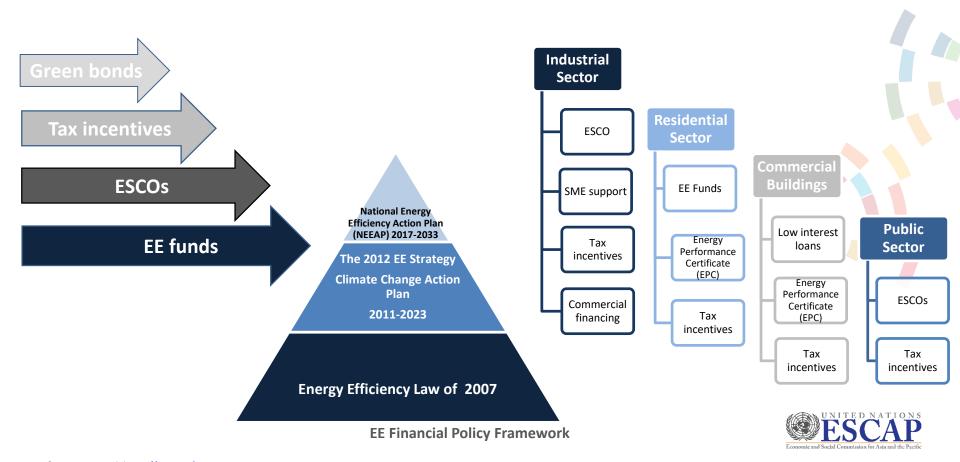


Energy Service Companies



ESCAP based on IEA. ESCOs:

Energy Efficiency Financing Mechanisms in Turkey



Key Energy Efficiency Recommendations for the Asia-Pacific Region

- Both public and private sectors can play an important role in financing EE
- Need greater investment and diversification of funds; innovative, marketdriven business models are critical
 - ESCOs
 - Green bonds
 - Green Banks
 - Innovative loan programs
- EE investment will be particularly important for growing transport sector
- Monitoring and evaluation are critical to success
- Equity and equality considerations in policies and programs



THANK YOU EYVALLAH

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