

**APEC Expert Group on
New and Renewable Energy Technologies**

Discussion:

**Joint Activities
Opportunities**

September 13, 2018



**Asia-Pacific
Economic Cooperation**

EGNRET

EGNRET 51 & EGEE&C 52 Joint Meeting

Chiang Mai, Thailand, Sep. 10-14, 2018

Synergies between RE and EE



“Although indicators and accounting methods for renewable energy and energy efficiency differ, from a technology point of view there are important overlaps between the two areas. A number of technologies both offer savings in primary energy demand and also increase the share of renewable energy in TFECE.”

Source: SYNERGIES BETWEEN RENEWABLE ENERGY AND ENERGY EFFICIENCY, IRENA, 2015

Promotion of RE&EE deployment



Policy

- **regulatory policies and institutional arrangements:**
clear and long-term policy goals, ensure flexibility in grid, avoid contradictory policies...
- **financial and economic tools:**
assign risks and benefits of RE&EE projects, enable varied financing methods...
- **technical, infrastructure and innovation:**
foster systems of innovation, encourage technology transfer, modernize energy infrastructure...
- **environmental concerns:**
develop codes, standards, certifications, develop GHG reduction targets, optimize access to international clean energy financing...
- **capacity and public awareness:**
Involve local communities, Ensure long-term approach to human capacity

Sector

Building

Transportation

Industry

Heating

Source: *Enabling Renewable Energy and Energy Efficiency Technologies*, IEA, 2015

Promotion of RE&EE deployment



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Renewable energy technology	Conversion efficiency		Efficiency gain to deliver the same energy service
	Renewable energy technology	Conventional technology	
End-use sector technologies			
Efficient cook stove	30-50%	10%	66-80%
Electric vehicle	0.7-1 MJ/p-km	1.7 MJ/p-km	40-60%
Heat pumps	350-450%	80-90%	75-85%
Variable renewable energy technologies			
Solar PV / wind	100%	30-55%	45-70%

Source: IRENA, 2014a

Modern cook stoves, electricity-based heating and transport technologies and most types of renewable energy power plants offer the potential to both improve energy efficiency and increase renewable energy share.