

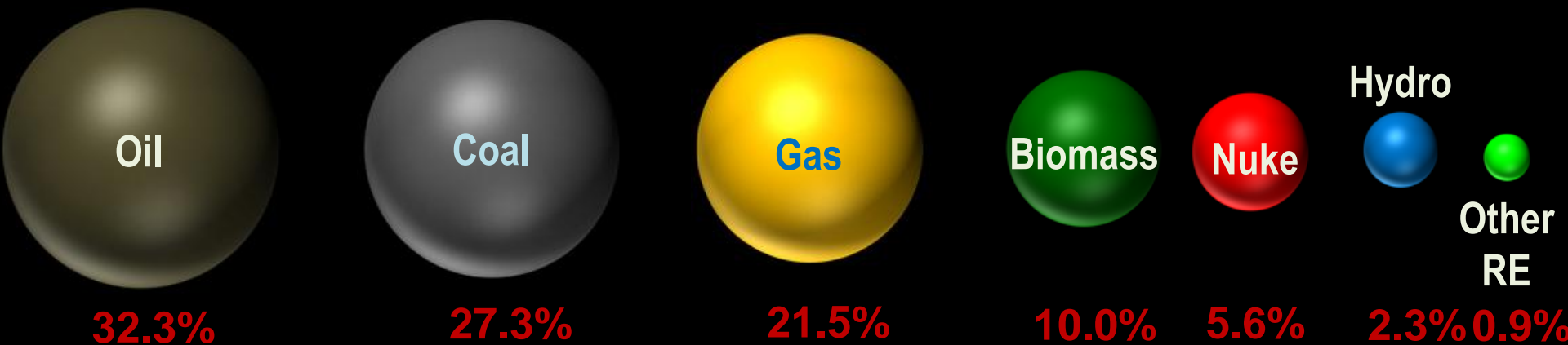
Accelerating Energy Efficiency in Asia

Aiming Zhou

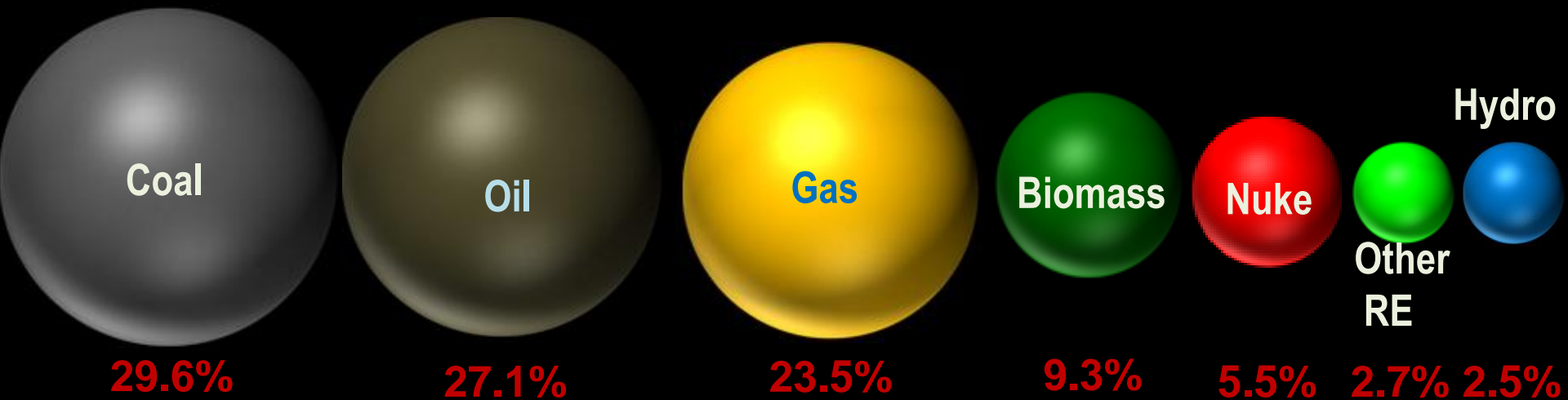
Senior Energy Specialist

Asian Development Bank

Today (2010): 12,730 MTOE



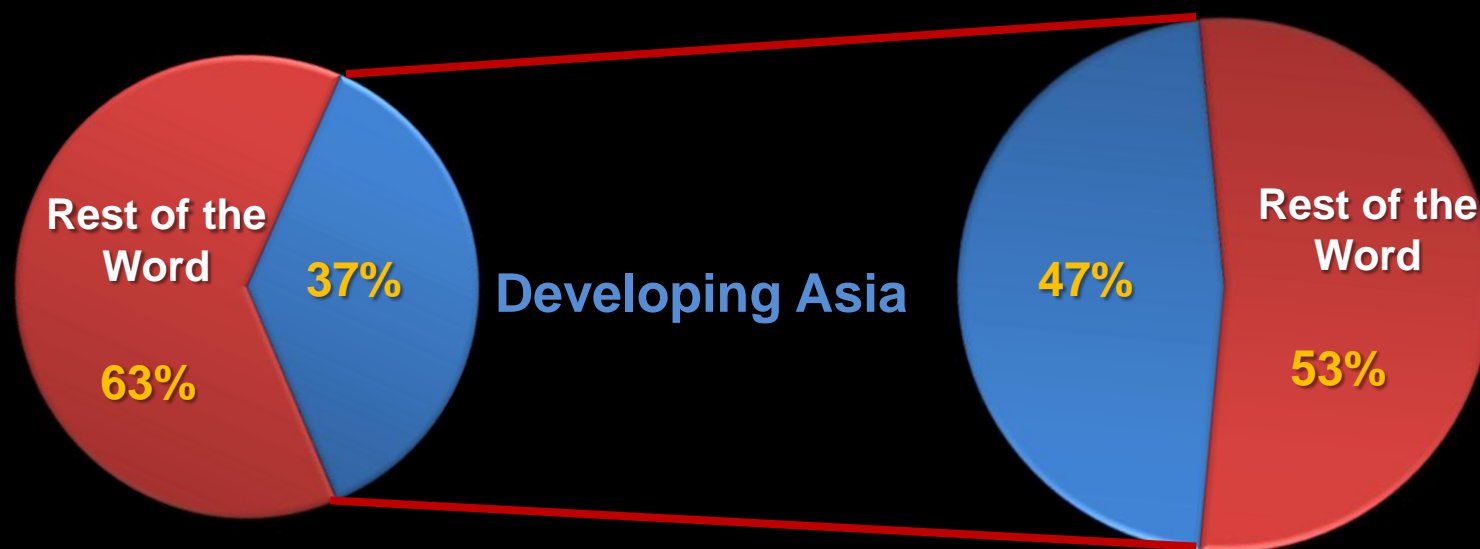
2035: 18,677 MTOE



Source: IEA, 2013

Developing Asia: 2010 vs 2035

Share in Global CO₂ Emissions from Energy Consumption



2010

Actual (World)

Total = 31,305 million tons CO₂

2035

Projection (World)

Total = 43,220 million tons CO₂

Source: ADB, APERC 2013

From IPAT Identity to Kaya Identity

Impact = Population x Affluence x Technology



Carbon Emission

= Population

x GDP/Population

x Energy/GDP

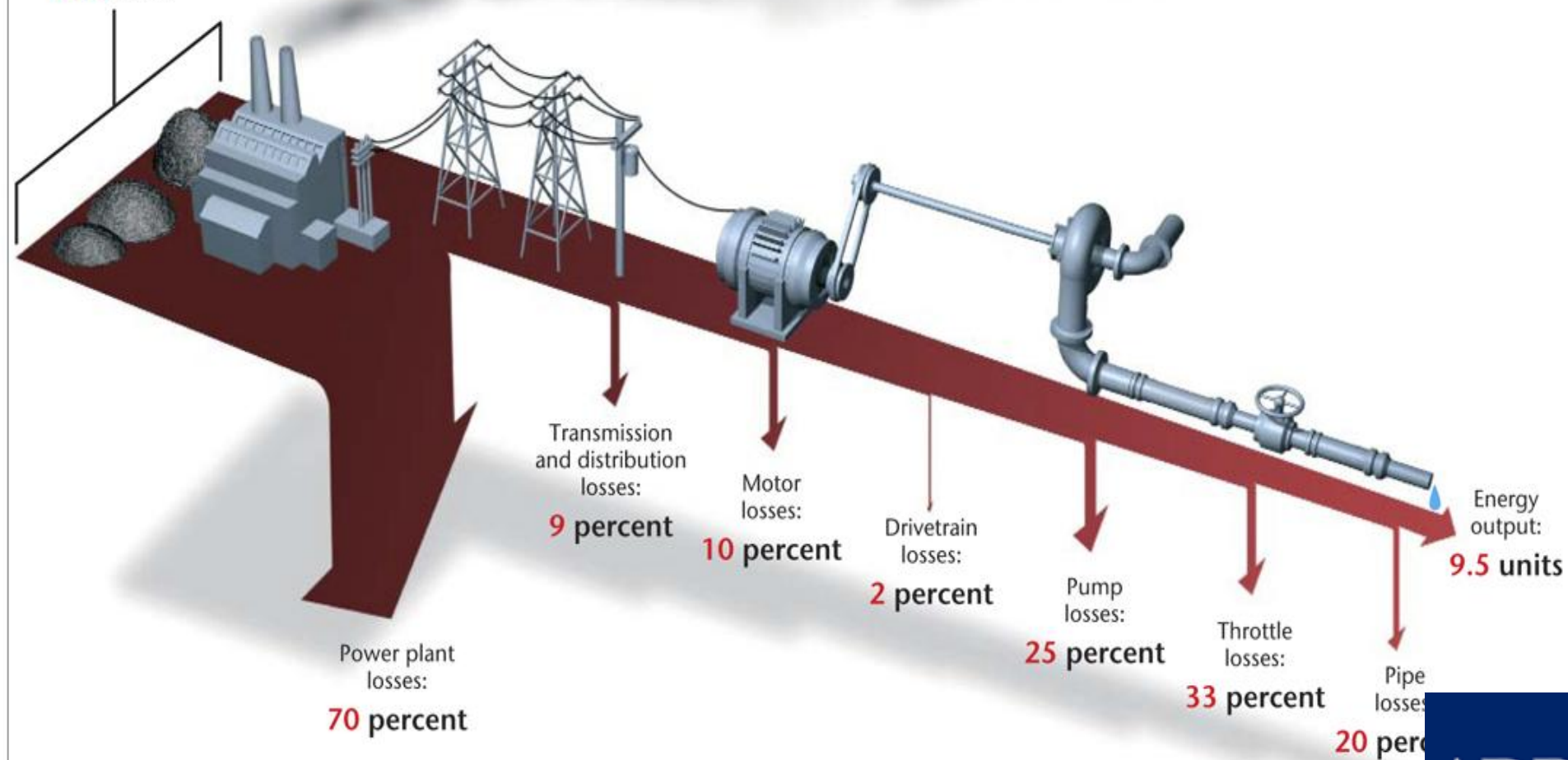
x Carbon Emission/ Energy

Energy Efficiency

Low/zero carbon fuels,
including renewable

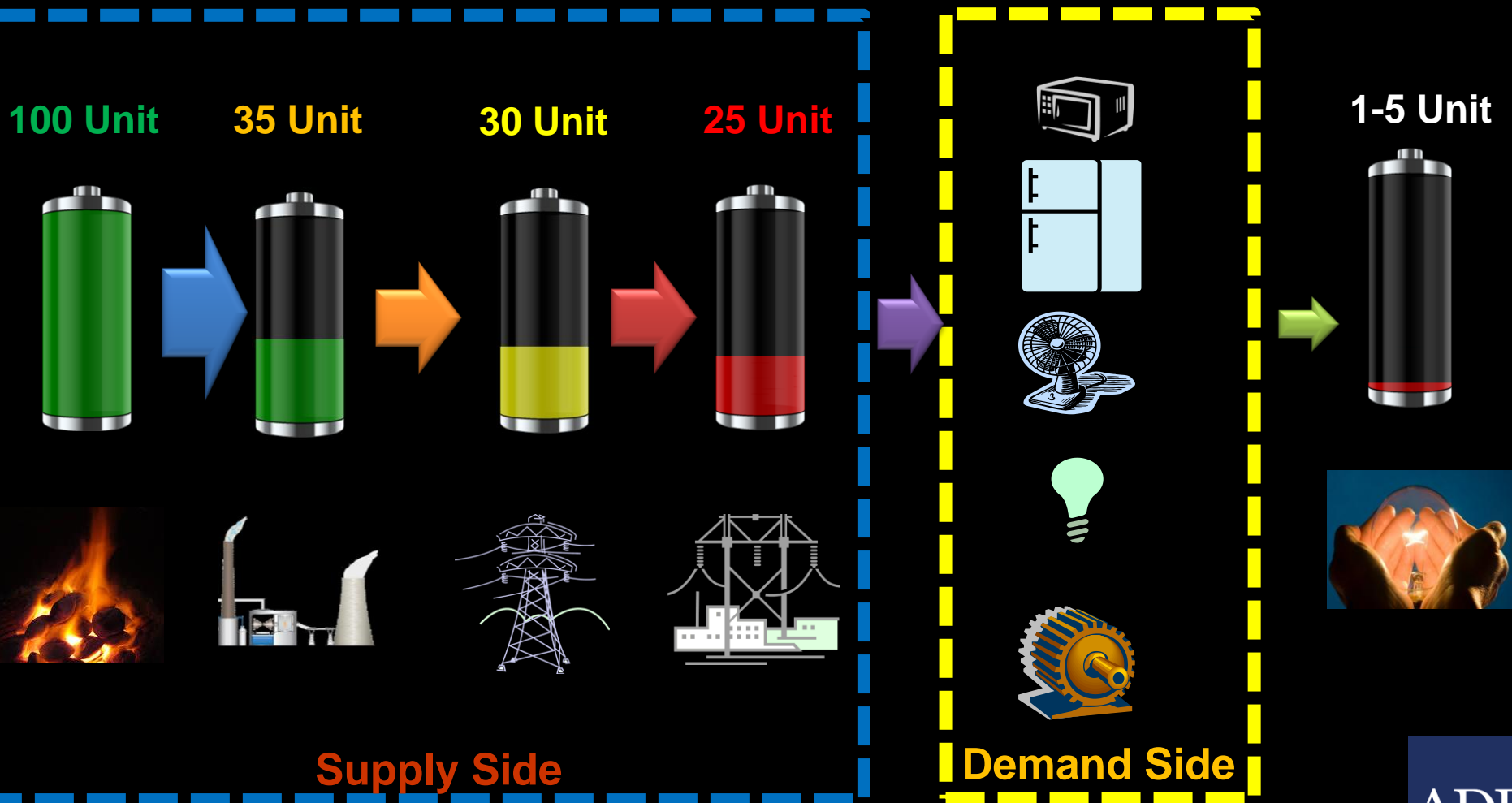
“More than **90%** of energy extracted from the ground is wasted before it becomes useful work.”

Fuel energy input (coal):
100 units



Energy Flow:

Energy Efficiency Matters

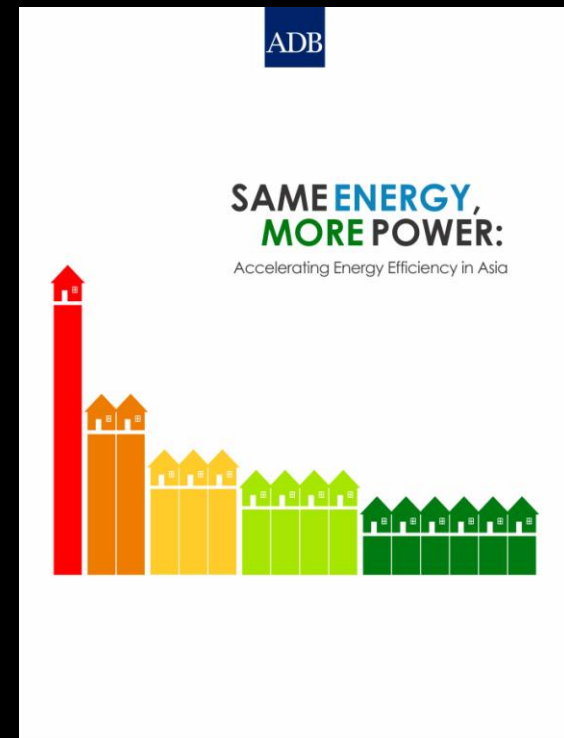


Key Findings from 2013 Publication

In Developing Asia

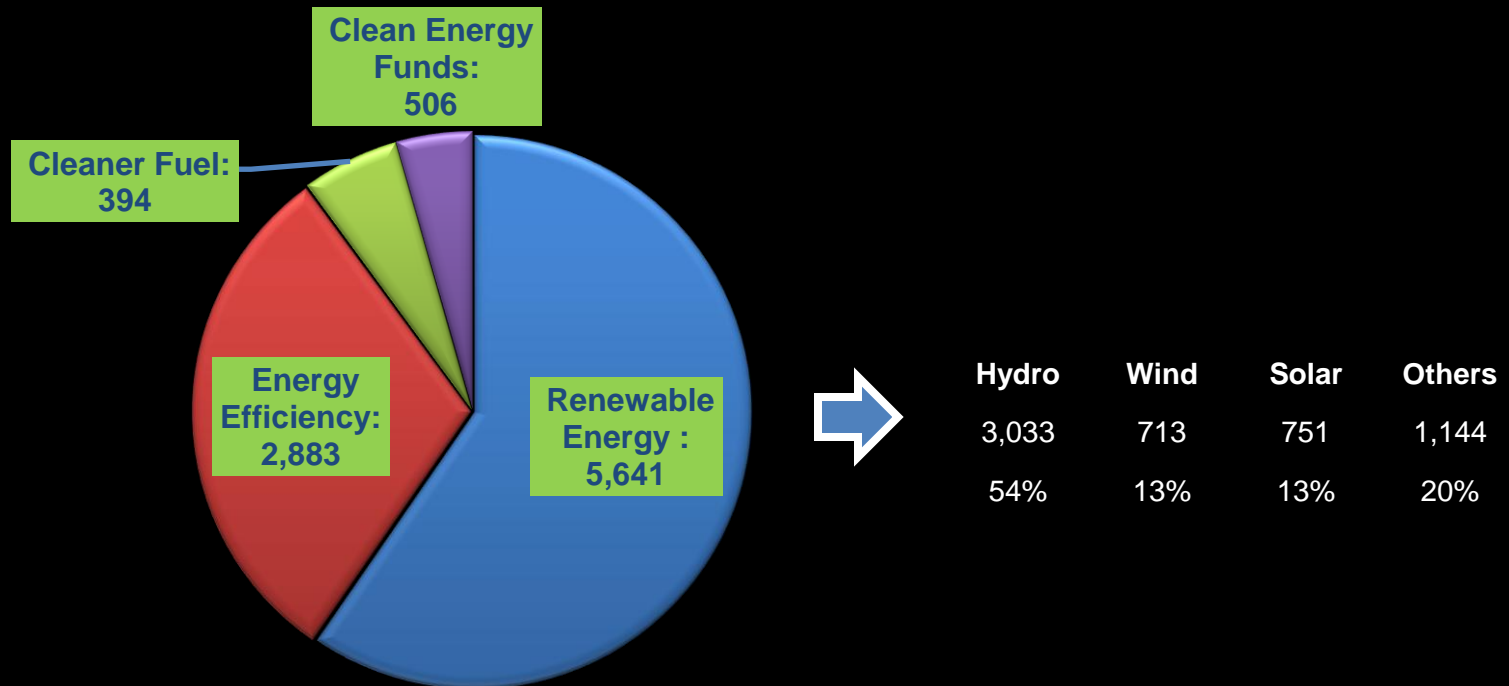
By 2020 “Investment needed to meet national targets in PRC, India and Southeast Asian countries totaled \$943 billion; of which, 92% in PRC, 7% in India and 1% in Southeast Asia.”

By 2030 “Investments of 1%-4% of overall energy sector spending can meet up to 25% of the projected increase in primary energy consumption”



ADB's Cumulative Clean Energy Investment by Project Type (2008-2012)

in \$ million

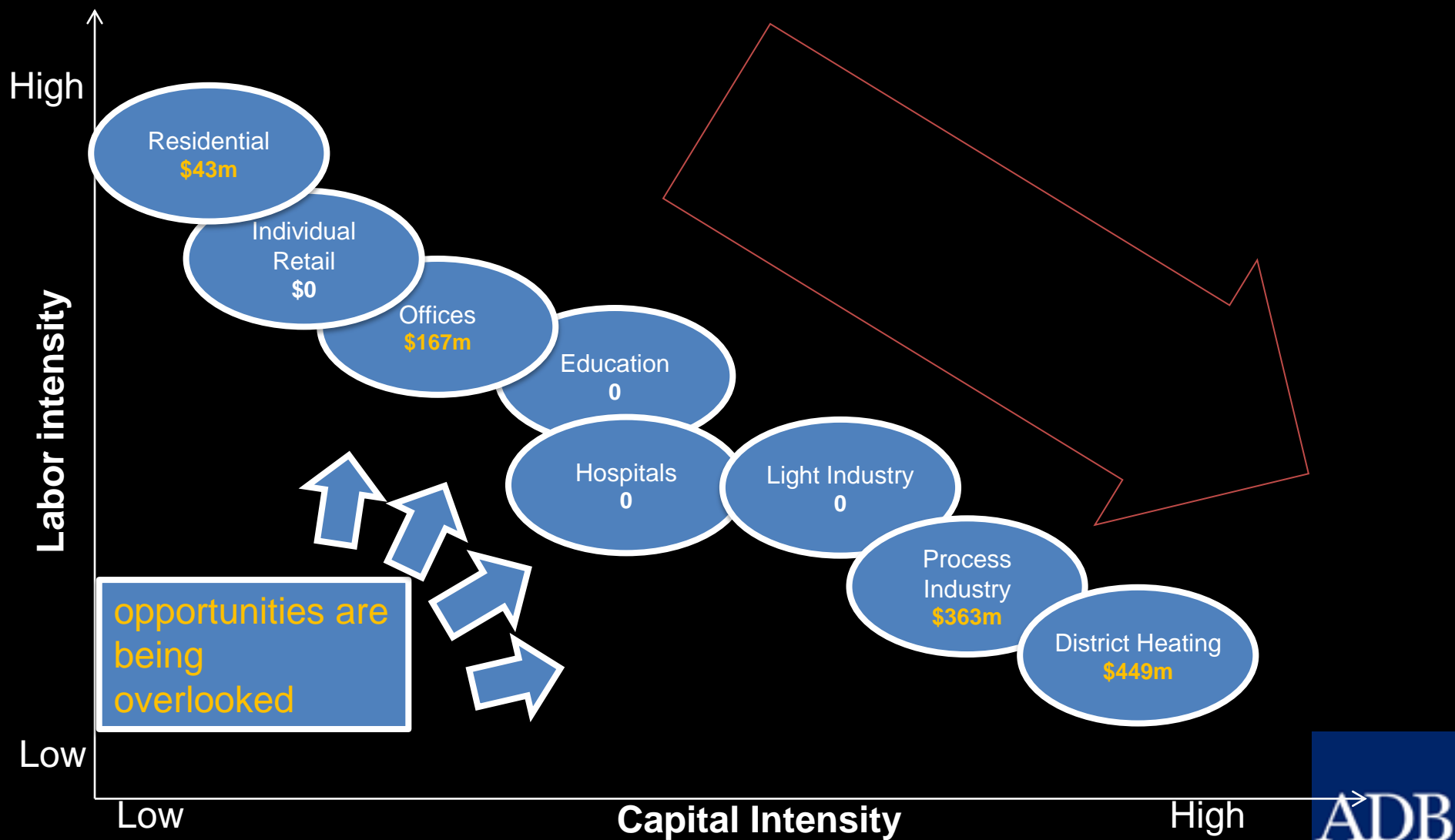


Total Energy-related Investment (2008-2012): \$ 18.1 Billion ;

Total Clean Energy Investment (2008-2012): \$ 9.4 Billion.

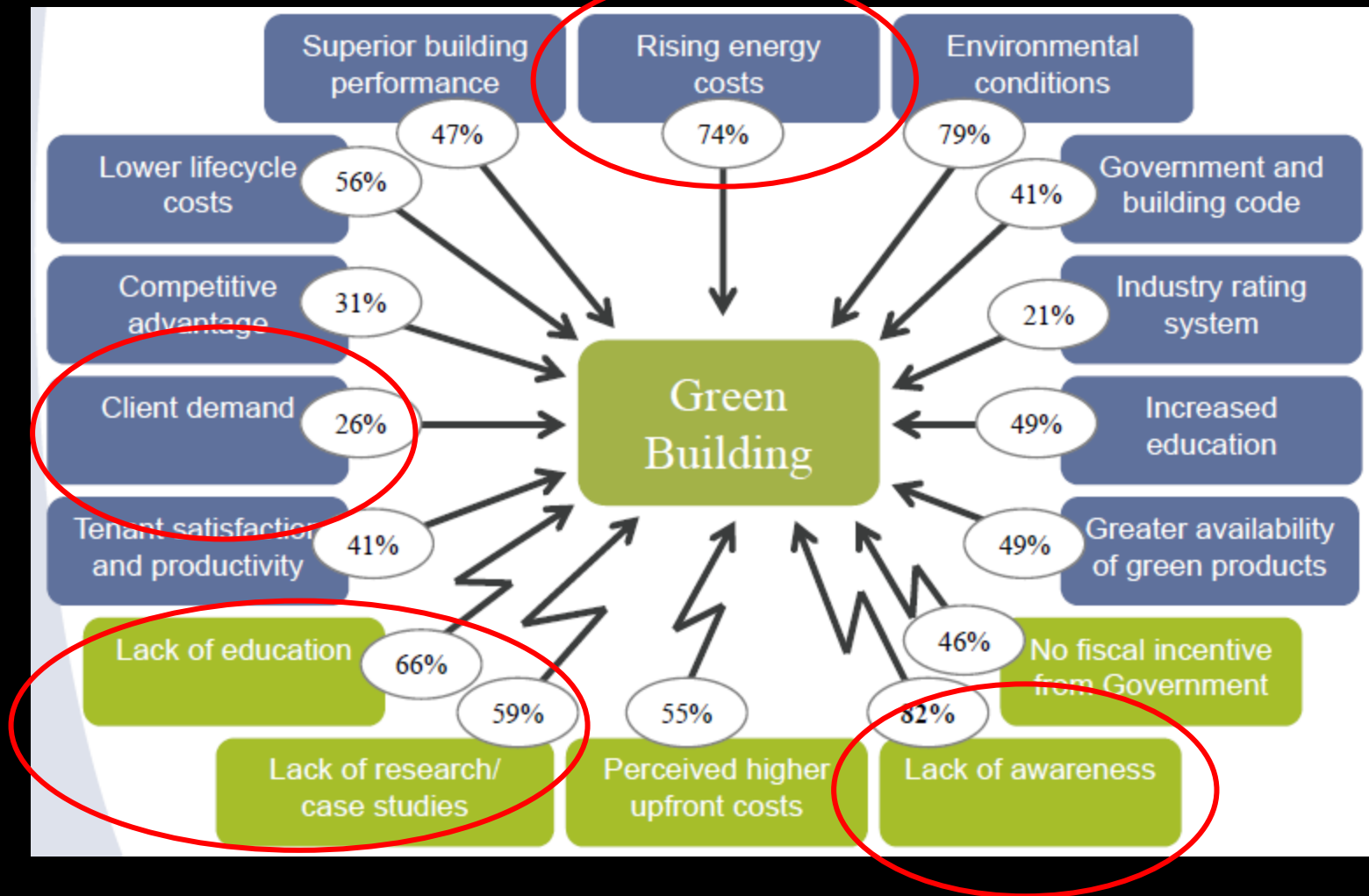
Note: "Others" in the breakdown of RE projects pertains to biomass/biogas, waste to energy

ADB's Demand-Side Energy Efficiency Investment

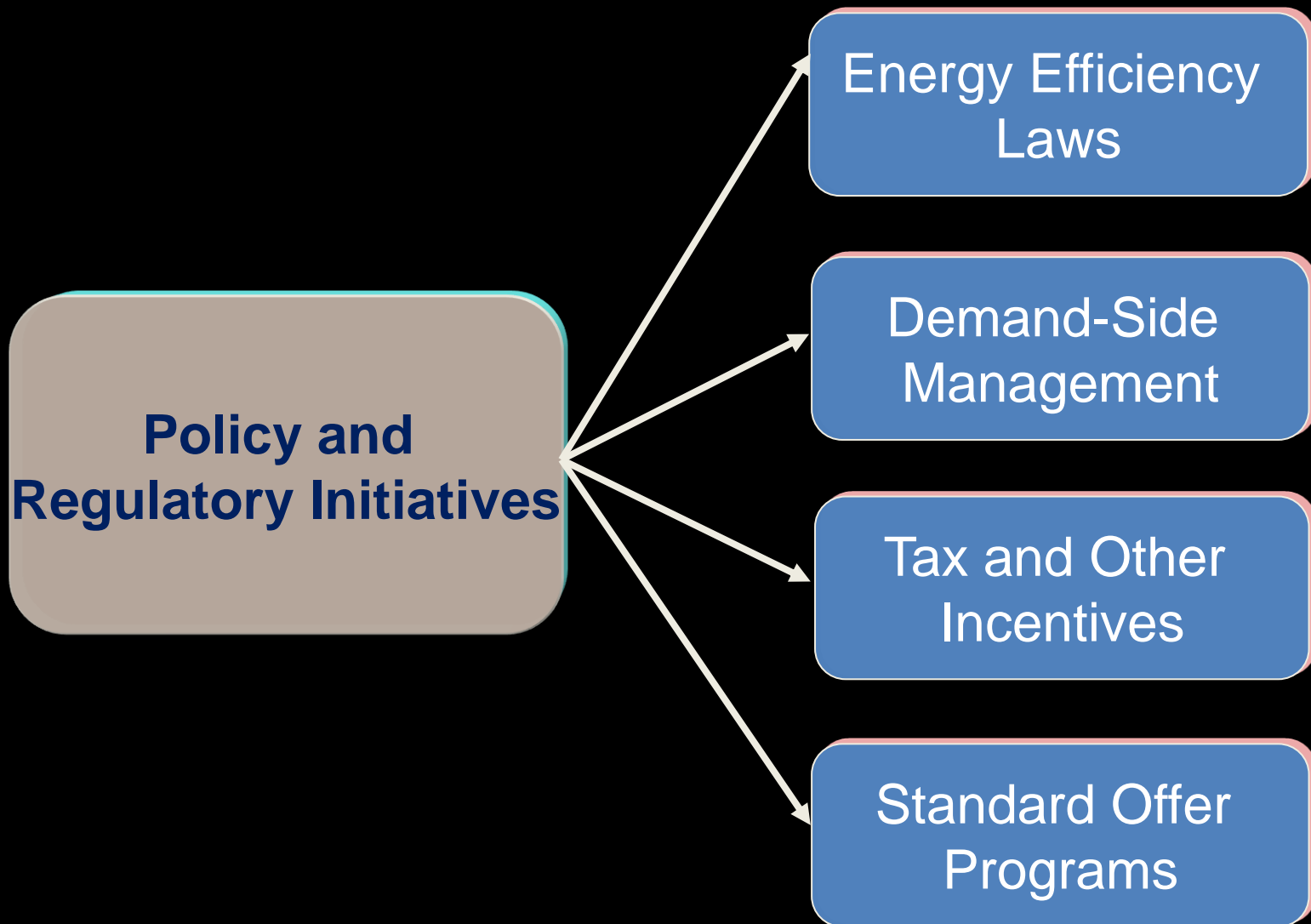


GB Barriers and Drivers

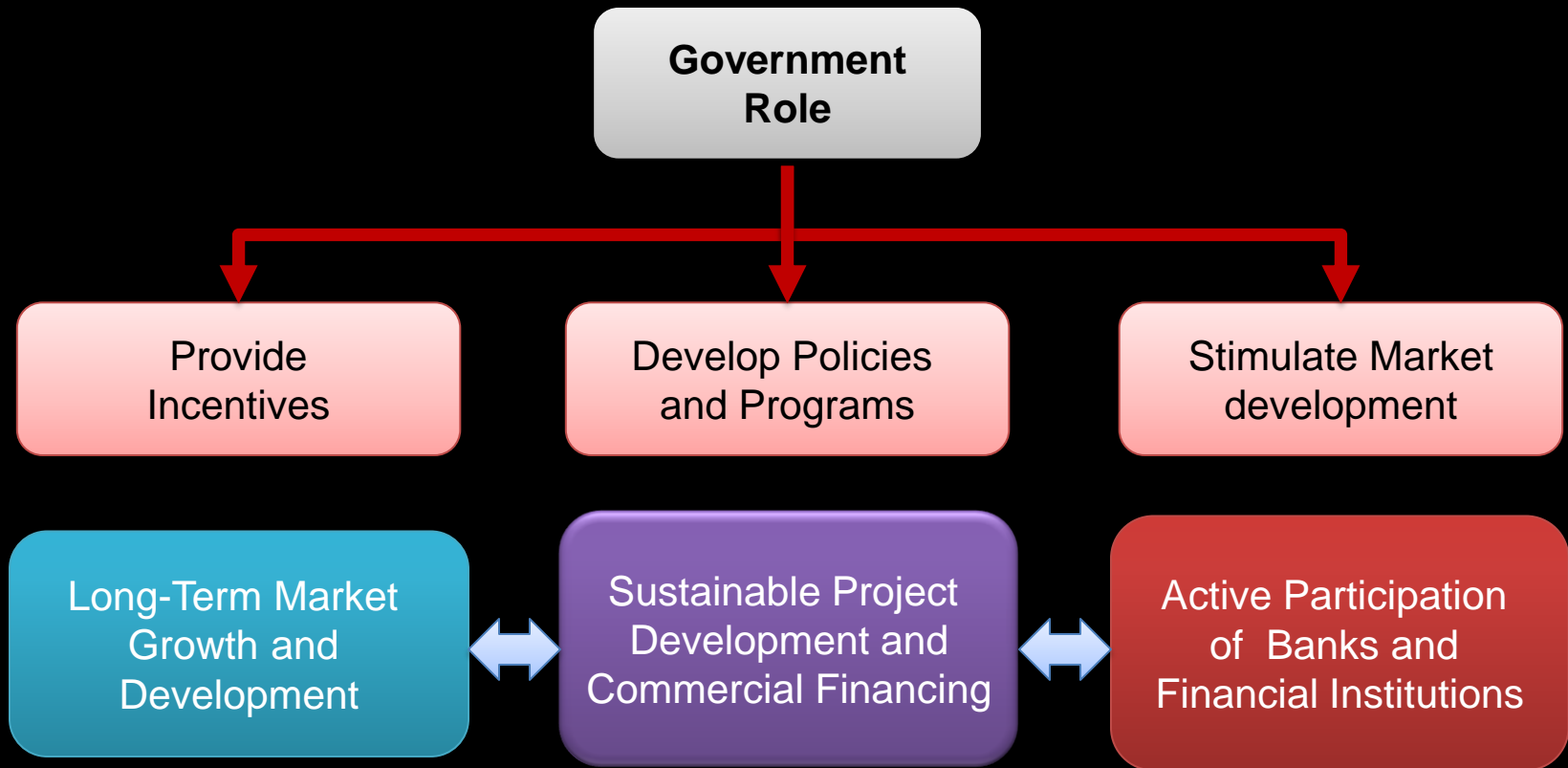
Green Building Market Report, BCI Asia 2008



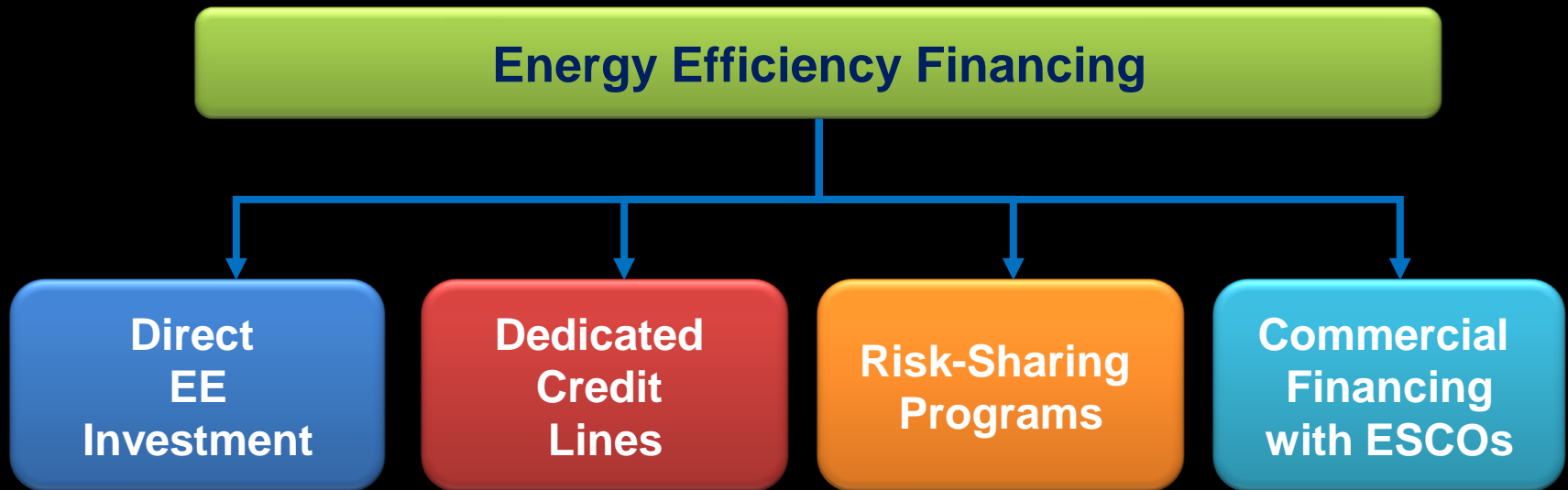
Policy and Regulatory Instruments



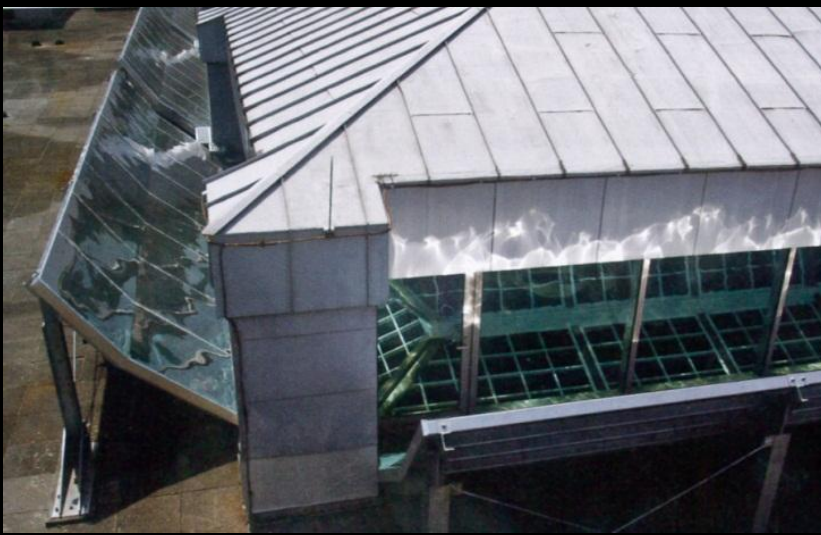
Government Role vs. Market Role



Financing Mechanisms



ADB: Leading by Example





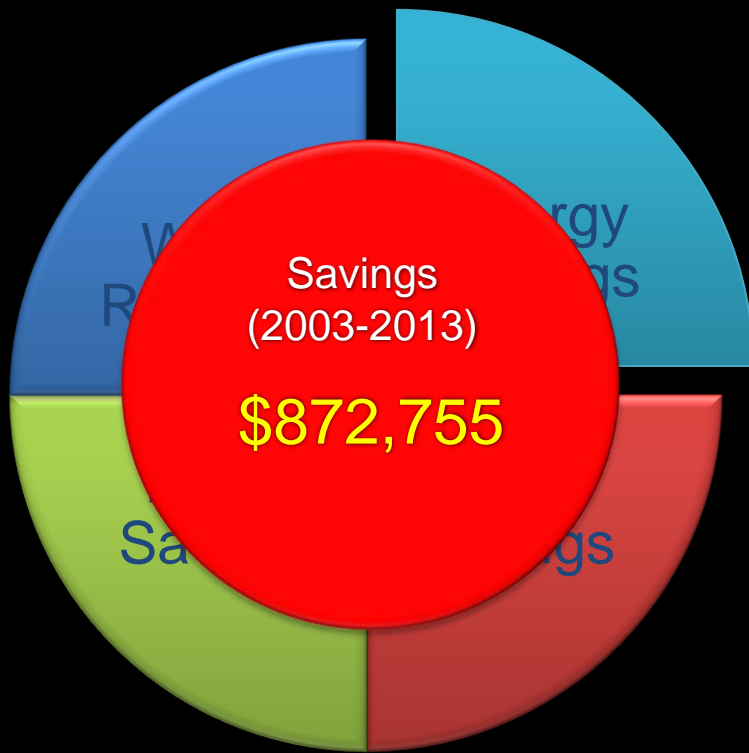
ADB Solar PV Project



- Inaugurated in June 2012
- Capacity: **571 kilowatts**
- Total Generated Electricity
2012-2013: **918,205 kWh**
- Total GHG Emissions avoided
2012-2013: **503 Tons CO_{2eq}**

Total Savings: 2003-2013 *(as of JuLY 2013)*

Resource Conservation Programs



Total Savings = \$ 437,879



Total Savings = \$ 49,871



Total Savings = \$ 147,930



Total Savings = \$ 237,074

Strategy to Accelerate EE Investment

- **One-Stop Service Provider:**

Energy Efficiency Technology Support Team (EETST) under ADB's Energy Community of Practice/RSDD

- **Enhancing ADB's Existing Role**

1. Institutional Expertise
2. Knowledge Management
3. Capacity Building And Coordination

- **Ramp up Technical and Policy Support in ADB's Developing Member Countries**

RETA 8483:

Asia Energy Efficiency Accelerator

- **Approved Oct, 2013**
- **Objective:**

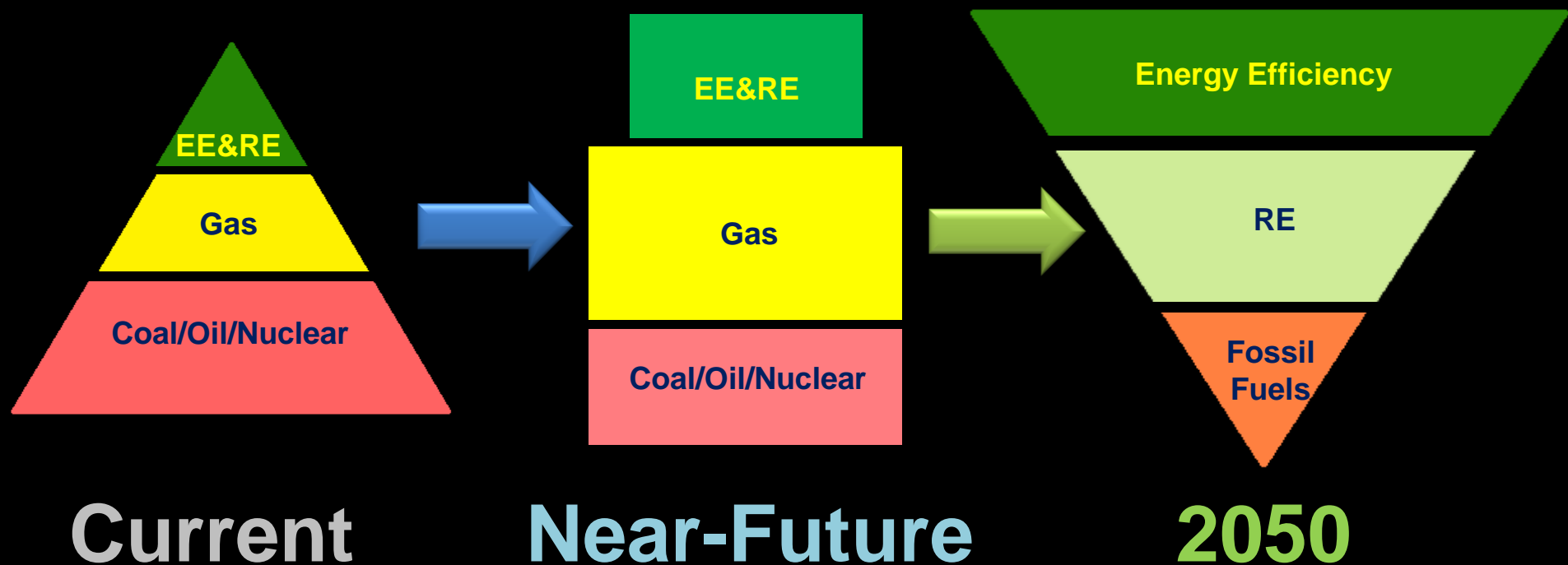
Support selected DMCs own initiatives to improve demand-side (rather than supply-side) energy efficiency for specific projects.

The proposed R-CDTA will expand ADB's clean energy investments, focusing on DSEE, by establishing systematic energy efficiency strategies and action plans in selected priority DMCs with a view to integrating them into Country Partnership Strategies (CPS) and/or Country Operations Business Plans (COBP).

- **Priority Countries**

INO, PHI, SRI, MON, KAZ

Market Transformation: Unlock Asia's Clean Energy Future



Thank You !

Contact

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More information: www.adb.org/clean-energy