



Asian Development Bank and Clean Energy Development in Asia and the Pacific

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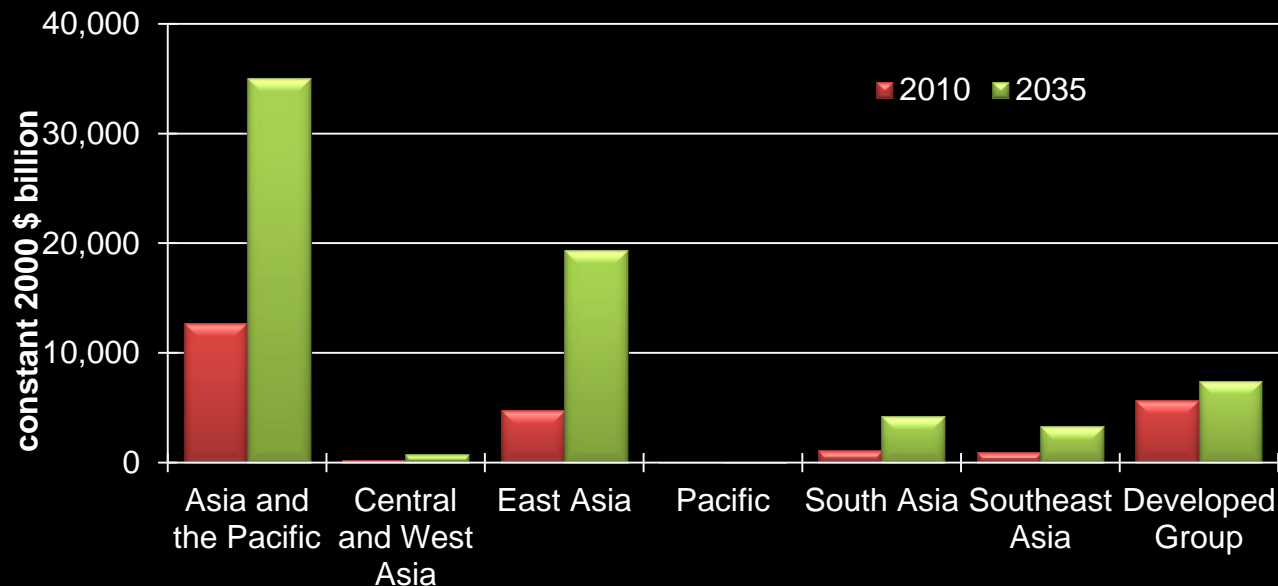
ENERGY OUTLOOK FOR ASIA AND THE PACIFIC

Coverage of the Outlook

- **Time Frame: 2010–2035**
- **Geographic Coverage:**
 - **Developing Asia**
 - Central and West Asia
 - East Asia
 - Pacific
 - South Asia
 - Southeast Asia
 - **Developed Group:** Australia, Japan, and New Zealand
- **Main Content:**
 1. Energy supply and demand outlook
 2. Electricity outlook
 3. CO₂ emissions outlook
 4. Energy investment outlook
 5. Policy implications

Growth in Asia and the Pacific

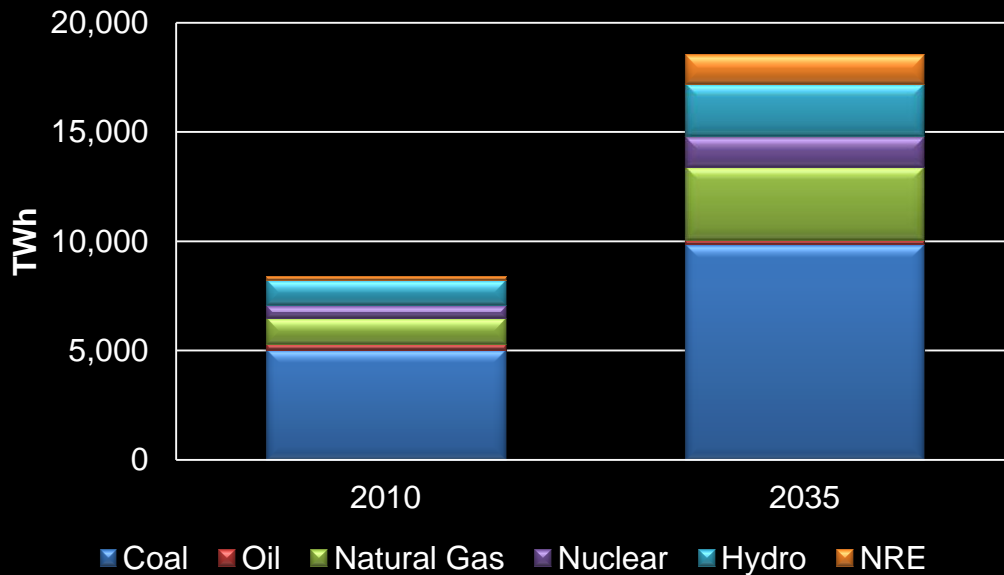
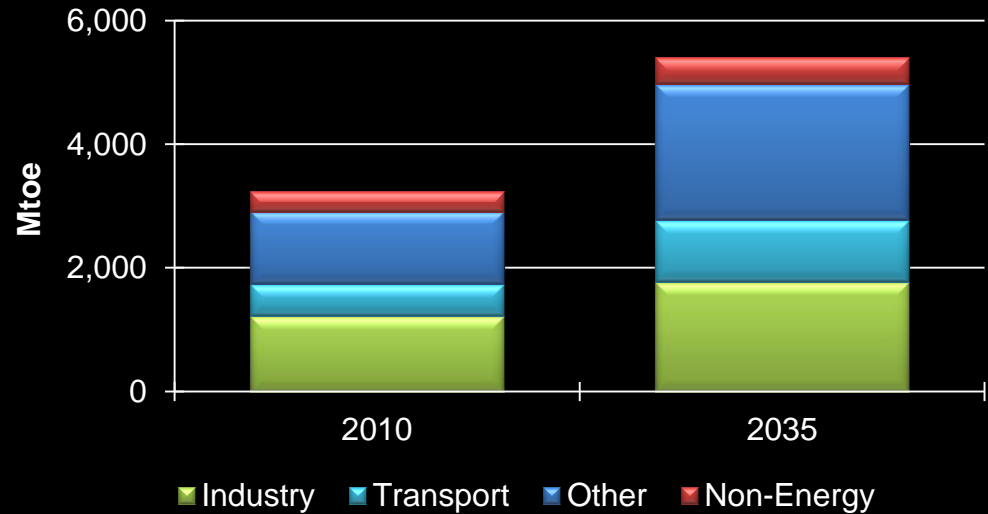
GDP Annual Average Growth Rate (2010–2035) = 4.1%



Population Annual Average Growth Rate (2010–2035) = 0.7%

Increasing Demand for Energy and Electricity Generation

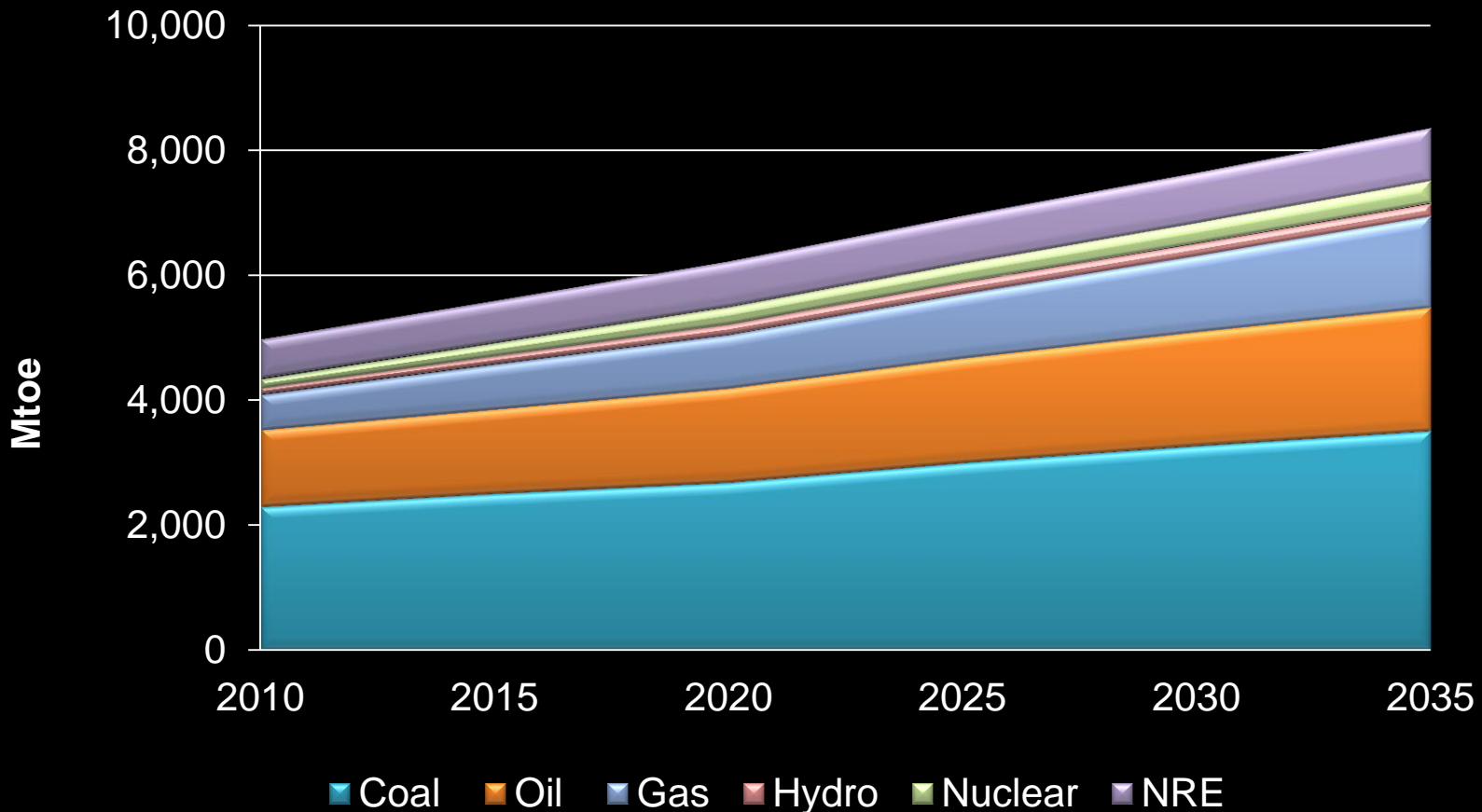
**Final Energy Demand
Annual Average
Growth Rate (2010–
2035) = 2.1%**



**Electricity
Generation Annual
Average Growth Rate
(2010–2035) = 3.4%**

Primary Energy Demand

Annual Average Growth Rate = 2.1%
Fossil fuels still supply the majority

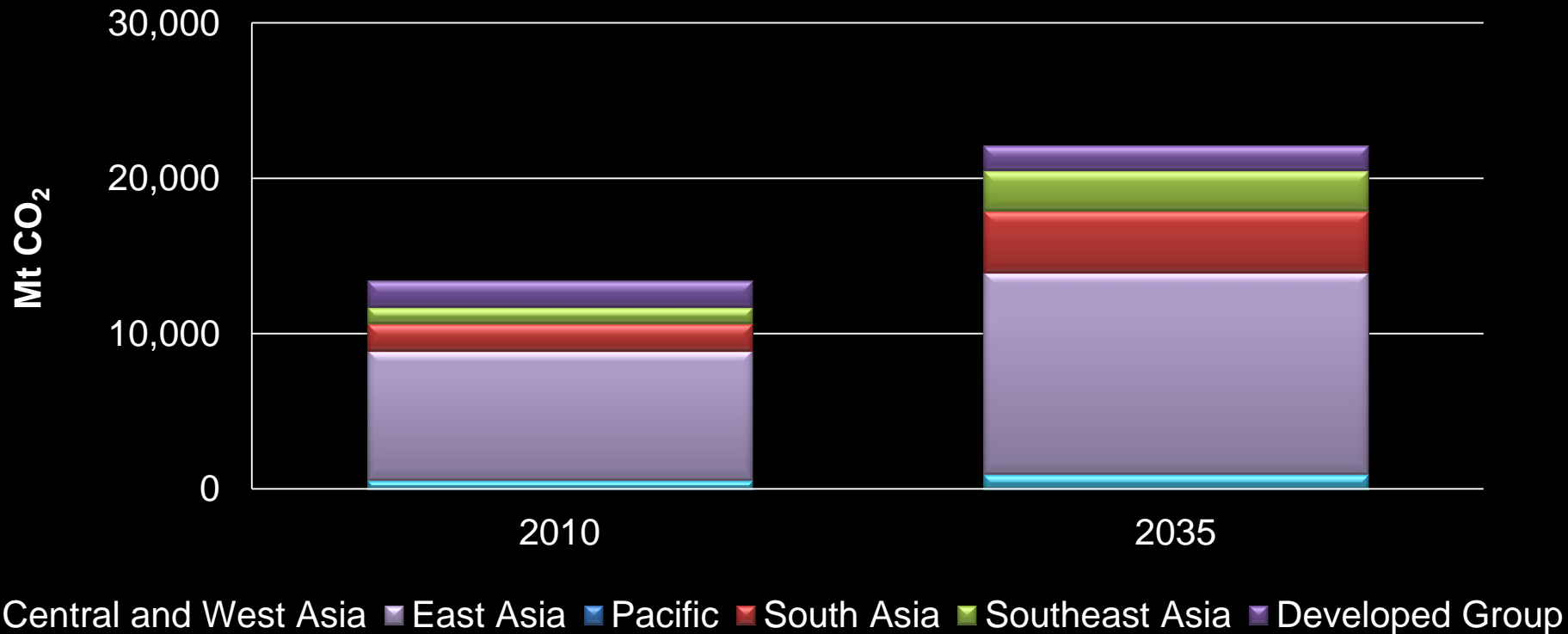


Carbon Dioxide Emission

2010: 13,404.0 million tons

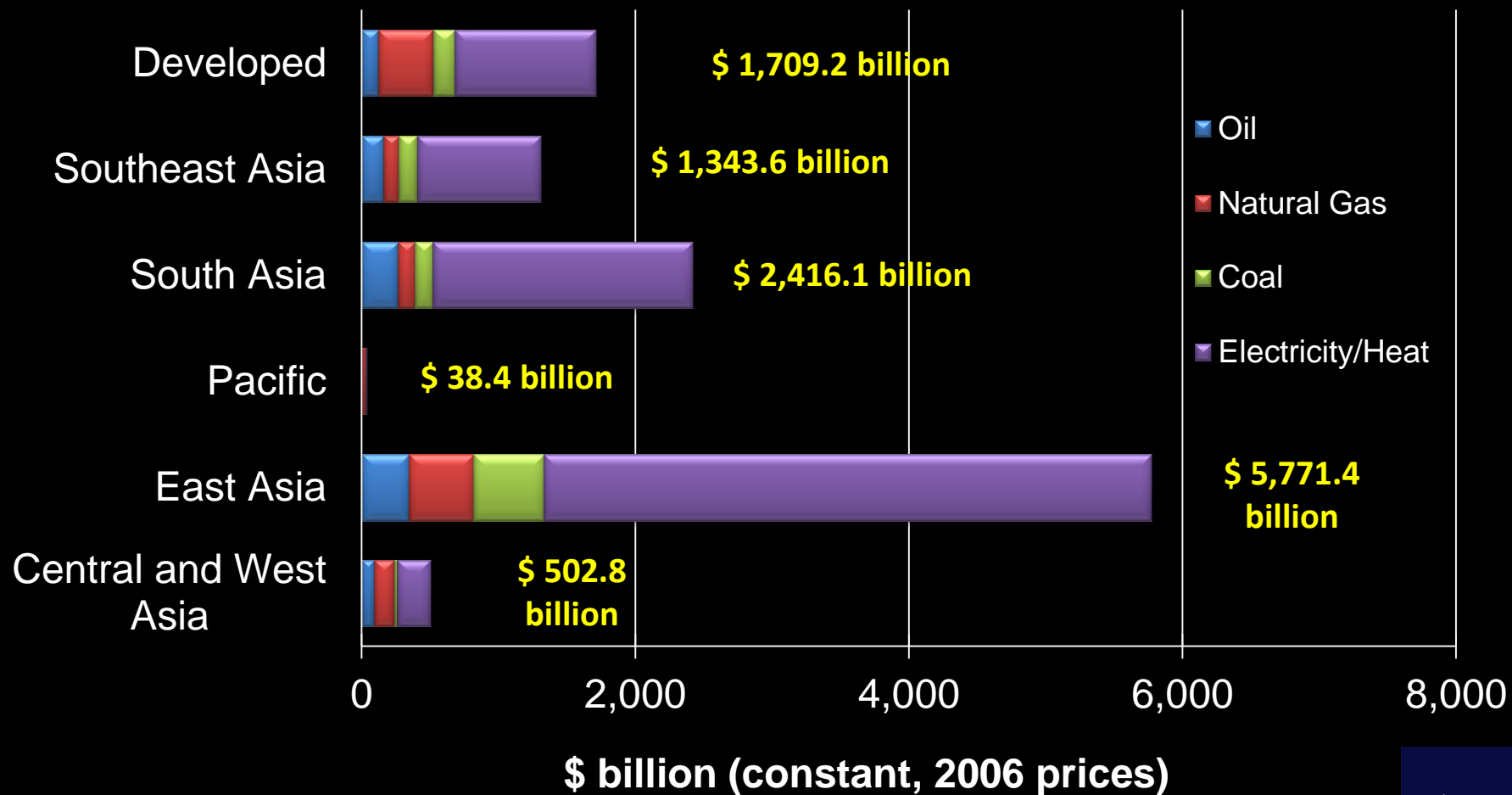
2035: 22,112.6 million tons

Average growth rate = 2.0%



Cumulative Investment Requirements in Energy Sector (2010–2035)

- **Cumulative investments by 2035 : \$11.7 trillion**
- **More investment in developing members**



Policy Implications

- 1. Energy security concern: Asia and the Pacific will continue rely upon imported fossil fuel, such as oil and gas**
- 2. Demand for coal will grow by more than 50% from 2010 to 2035**
- 3. Asia and the Pacific has a large untapped renewable energy potential**
- 4. There is room to reduce energy demand both from the demand side and supply side (e.g. through the widespread use of high efficiency appliances, or the rehabilitation/phasing out of aging, unreliable, and low efficiency power plants). There is a need to rehabilitate and/or phase out aging, unreliable, and low efficiency power plants**
- 5. Large amounts of investments is required**



Asian Development Bank

WHO WE ARE

The Asian Development Bank (ADB) is an international development finance institution owned by 67 members, 48 of which are from Asia and the Pacific.

Vision

An Asia and Pacific region free of poverty

Mission

To help its developing members to reduce poverty and improve their living conditions and quality of life

Main Instruments

- Loans
- Technical assistance
- Grants
- Guarantees
- Equity investments
- Policy dialogues



Our Strategy: Strategy 2020





Asian Development Bank

FOCUS AREA: ENERGY

Energy Policy 2009

Objective

To help ADB's Developing Member Countries provide reliable, adequate, and affordable energy for inclusive growth in a socially, economically, and environmentally sustainable way



Clean Energy



Access to Energy



**Sector Governance
and Reform**



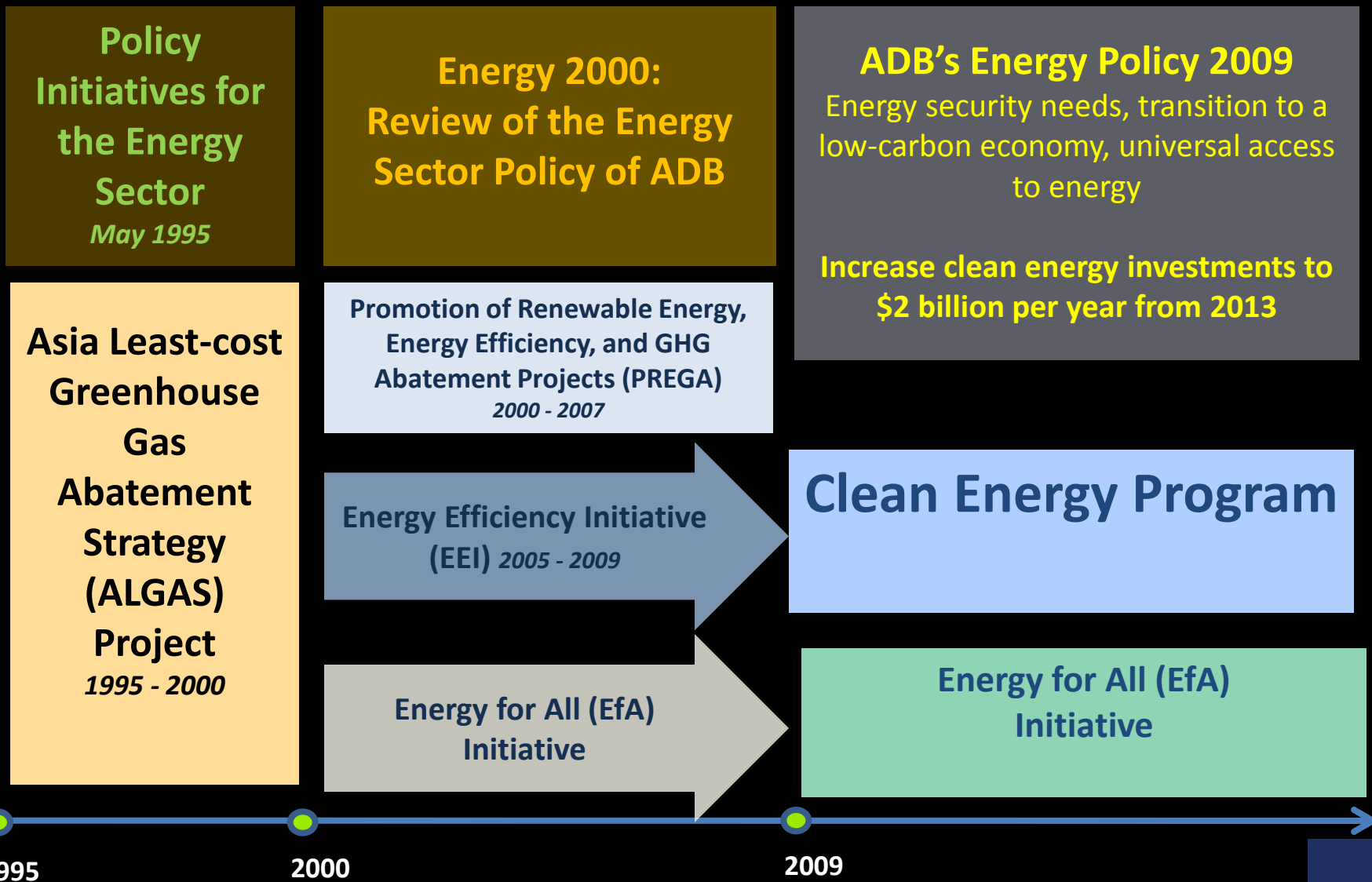
Regional Cooperation



Asian Development Bank

CLEAN ENERGY PROGRAM

Evolution of the Clean Energy Program



Clean Energy Program

Objectives

Increase EE in energy, transport, & urban sectors in DMCs

Adopt renewable energy technologies

Improve access to energy for the poor

Initiatives

Solar/Wind Initiative

Energy for All Initiative

New Energy Efficiency Initiative

Funds & Partnerships

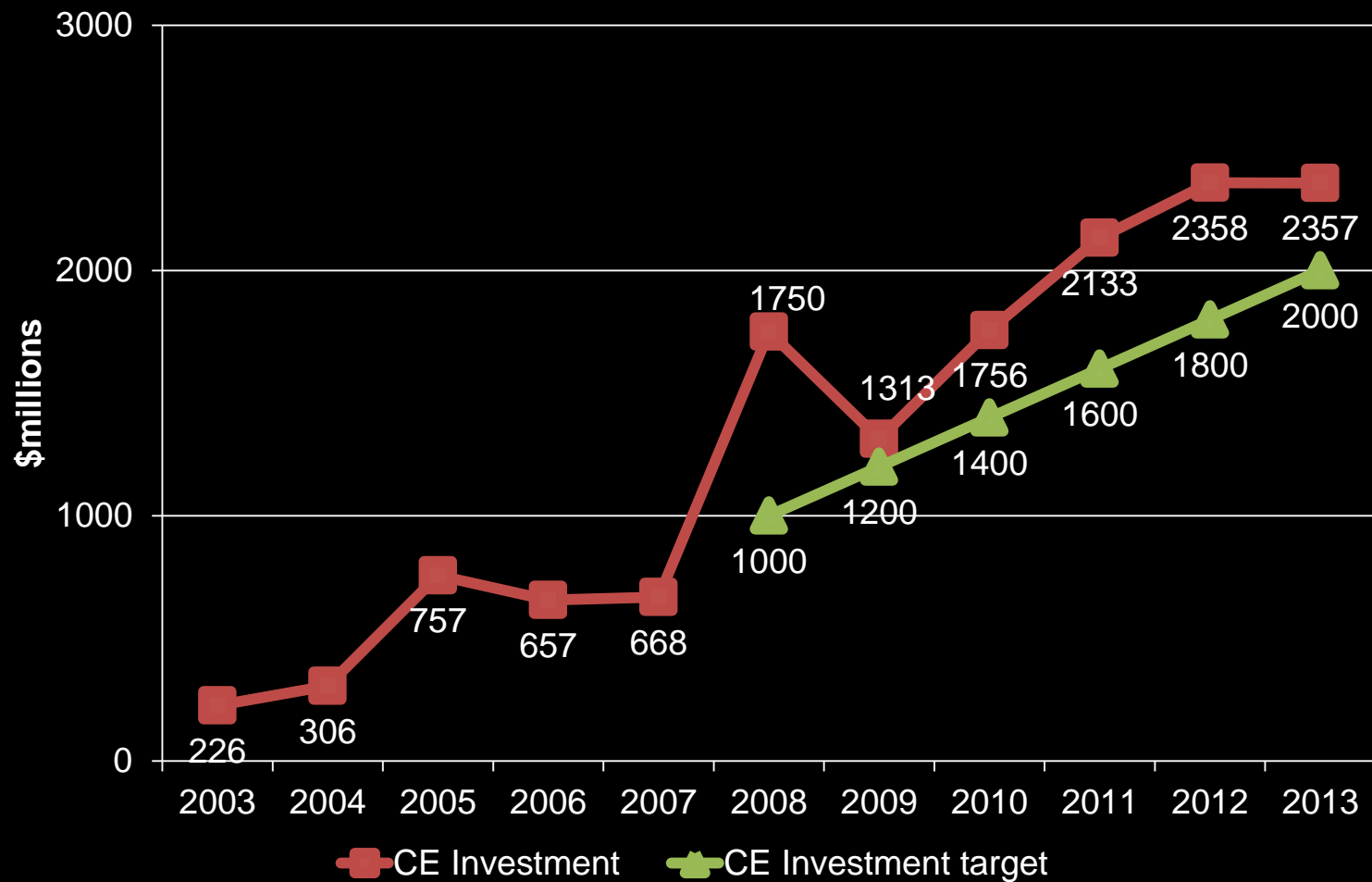
Clean Energy Financing Partnership Facility

Climate Change Fund

Asia Pacific Carbon Fund

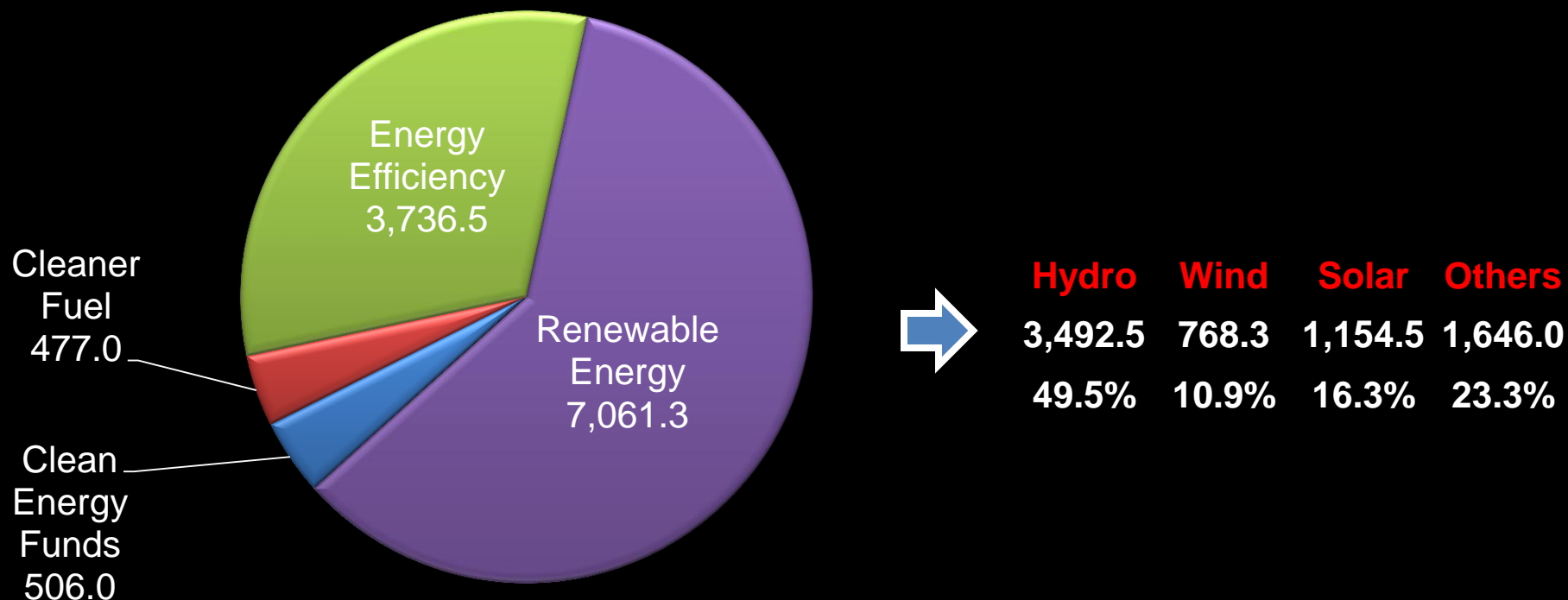
Future Carbon Fund

ADB Clean Energy Investments



ADB's Cumulative Clean Energy Investment by Project Type (2008-2013)

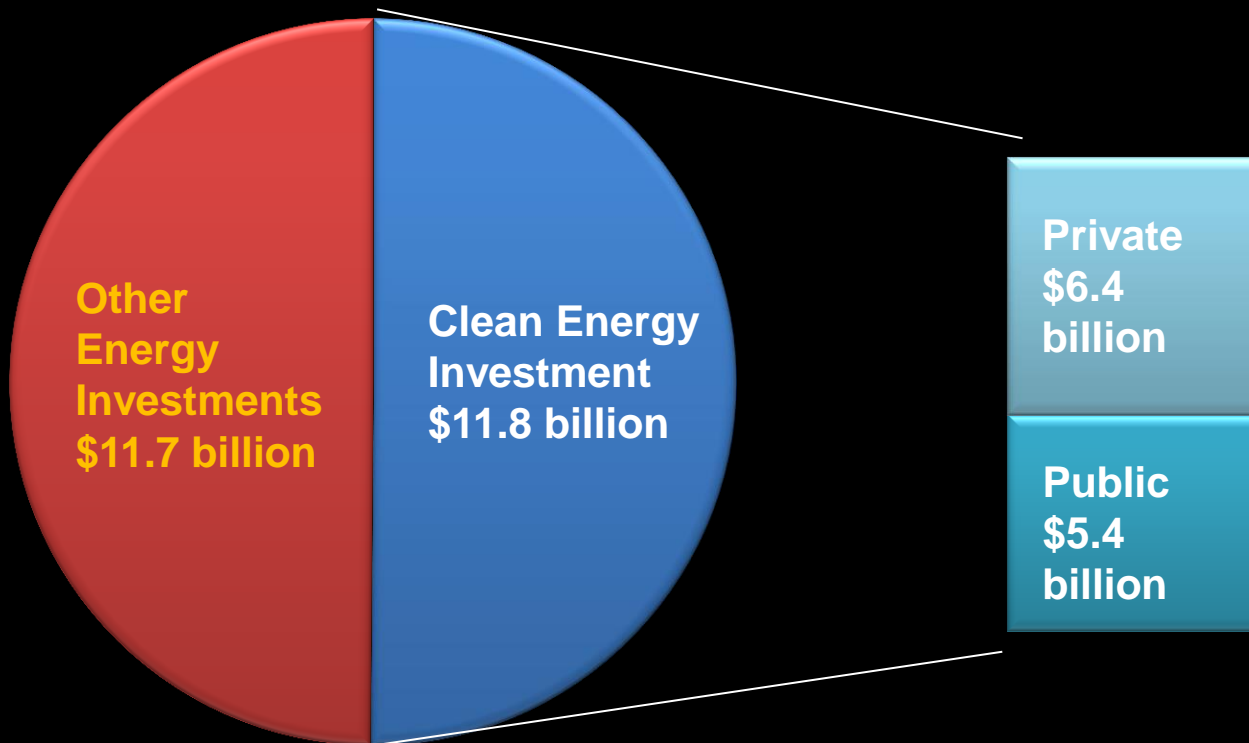
in \$ million



Total Energy-related Investment (2008-2013): \$ 23.5 Billion ;
Total Clean Energy Investment (2008-2013): \$ 11.8 Billion.

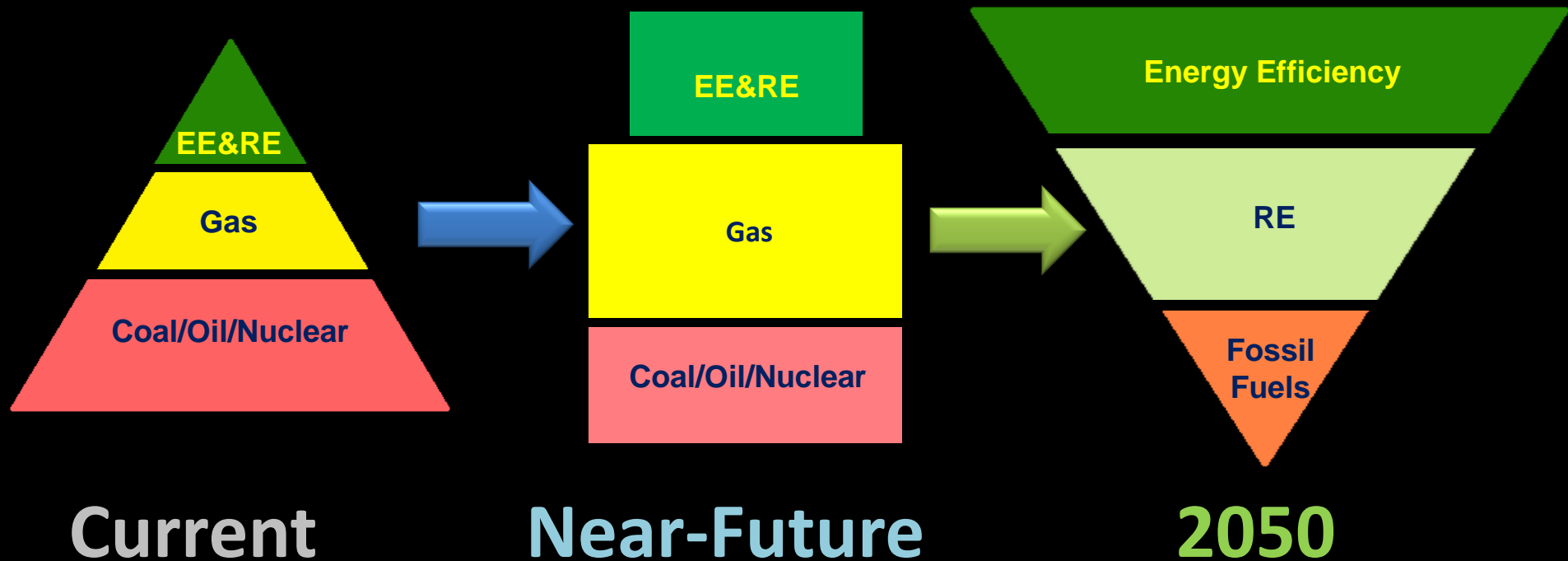
Note: "Others" in the breakdown of RE projects pertains to biomass/biogas, waste to energy

ADB's Cumulative Clean Energy Investment – Public vs. Private Sector (2008-2013)



**Total Energy-related Investment
(2008-2013): \$ 23.5 billion**

Market Transformation: Unlock Asia's Clean Energy Future



THANK YOU