



# ADB in Asia and the Pacific's Energy Sector

20<sup>th</sup> Asia Clean Energy Forum  
4 June 2025





# ENERGY SECTOR

## CHALLENGES

- energy access, energy security
- regressive & outdated sector governance
- mistargeted subsidies & financial incentives
- involving private sector to meet massive investment requirements





# ENERGY SECTOR

## OPPORTUNITIES

- falling cost of renewable energy vs. conventional energy
- emerging new & innovative low-carbon energy technologies
- maturing digital and smart technologies
- global commitments: SDG7, NDCs for the Paris Agreement





# ADB ENERGY POLICY

- energy security that is sustainable and resilient
- private sector participation and good governance
- regional energy cooperation and integration
- integrated cross-sector operation to maximize development impact







# ENERGY SECTOR

## • OPERATIONAL FOCUS

- low-carbon energy transition
- just energy transition
- advanced clean energy technologies, demand-side energy efficiency
- digitalization, smart power systems
- leveraging commercial financing



# Climate Change Shift: Energy Transition Initiatives

## Production

- Clean power generation (solar, wind)
- Production efficiency improvement
- Alternative fuels: hydrogen, biofuels
- Accelerated decommissioning of fossil fuel-based generation
- Improving generation dispatch regimes

## Transportation

- Power transmission and distribution efficiency improvement
- Flexible infrastructure for alternative cleaner fuel

## End-Use Energy Transition Initiative

- Efficiency improvement
  - Combined heat and power
  - Improved metering
  - Building-Grid (B2G) ecosystem
- Alternative energy for transport and industries
  - Electricity, hydrogen, biofuels
- Alternative technologies
  - Heat pumps
  - Solar heating
- Cross-sectoral interventions to decarbonize
  - Agricultural power consumption
  - Water sector (efficient use)





# Private Sector Development Shift

- Policy dialogues
- Sovereign & nonsovereign interventions
- With OMDP, develop PPP opportunities
  - Philippines, Cambodia: Energy Transition Mechanism
  - Funding Vehicle
  - Samoa: coordinated work in generation planning, T&D investment, PPP advisory, IPP financing

## Upstream

- Policy Reform
  - ✓ Cost-reflective tariff
  - ✓ State-owned enterprises commercialization
  - ✓ Improve investment climate
- Policy Dialogue
  - ✓ Renewable energy (RE) generation
  - ✓ Specific transmission and distribution investments
  - ✓ Green mining principles and clean energy manufacturing

## Midstream

- Develop bankable contractual framework for RE projects
- Screening, preparation, and tendering of RE projects
- Innovative financial products, and market development

## Downstream

- Sovereign financing: credit enhancement for RE development
- NSO financing: mobilize co-financing for solar, wind, and hydropower



# Solutions Shift: Digital & High-Level Technology

Digital technologies for RE integration and energy efficiency

- Grid management
- Smart meters

Adoption of technologies for

- Advanced biofuels
- Geothermal systems
- Demonstrations of ocean energy
- Carbon capture, use, and storage

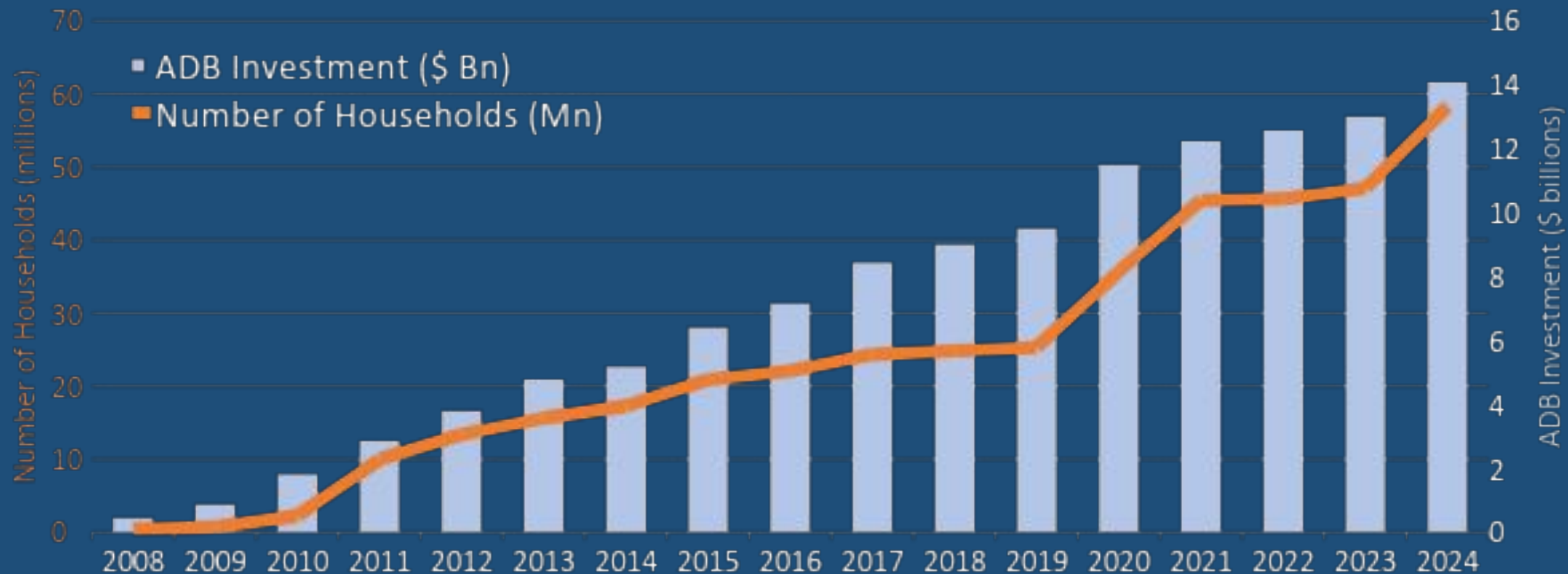
Pilot testing innovative technologies and business models



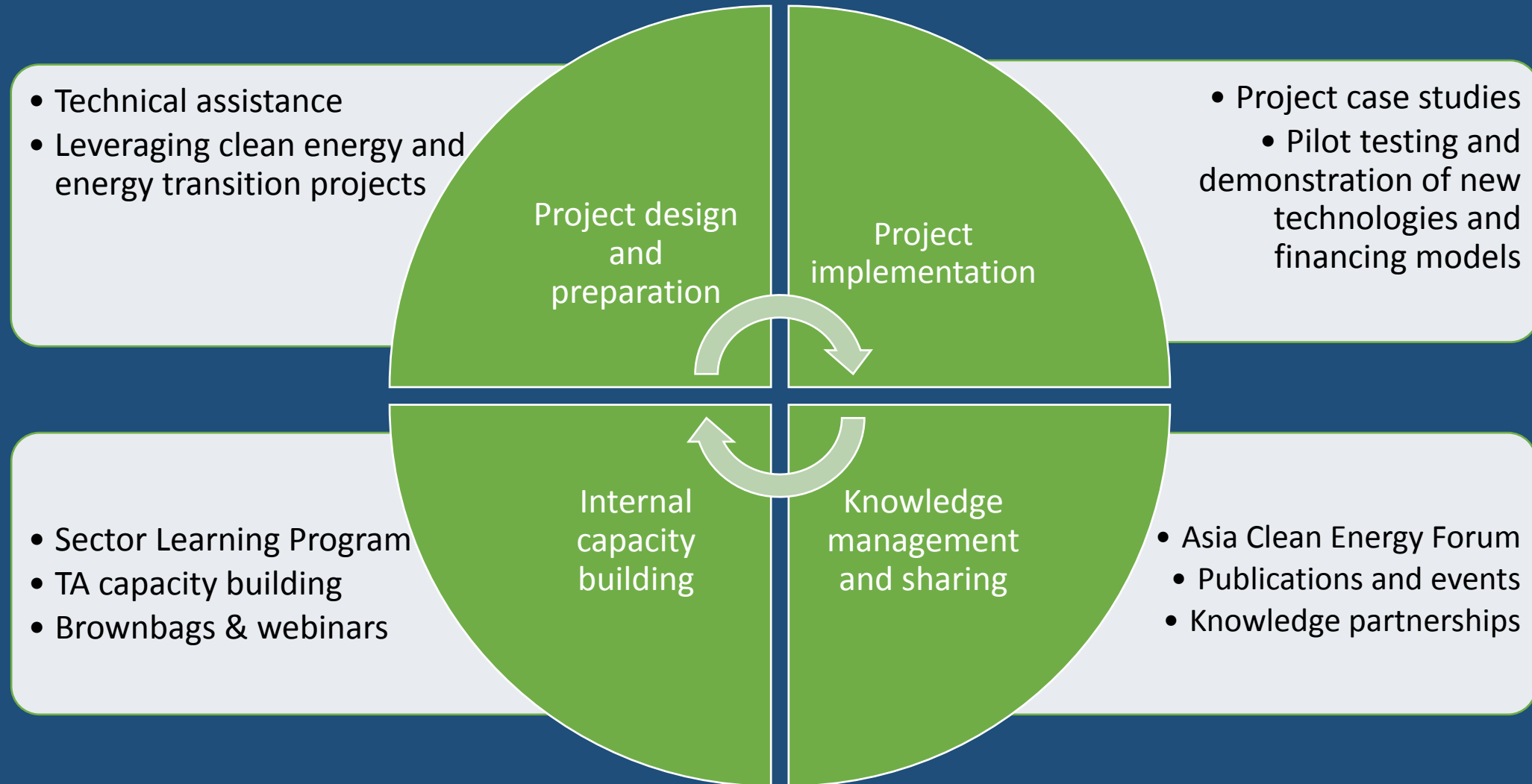




# Energy for All – Cumulative Data



# Knowledge Framework in the Energy Sector





# Knowledge Partnerships

- International Atomic Energy Agency
- International Energy Agency
- Korea Energy Agency
- Sustainable Energy Association of Singapore
- Sustainable Energy for All
- United Nations Economic and Social Commission for Asia and the Pacific
- World Economic Forum
- Ministry of Economy, Trade and Industry of Japan
- Economic Research Institute for ASEAN and East Asia – under Asia Zero Emission Community



Thank you.

