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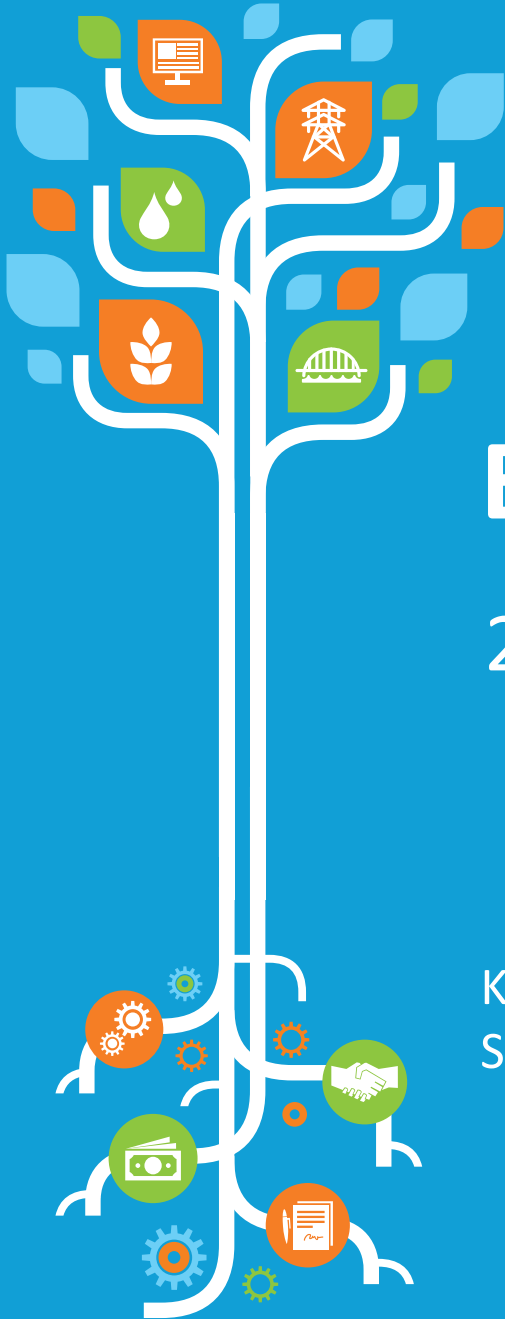
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Energy Sector Group

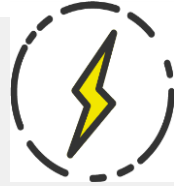
26 April 2022

Kee-Yung Nam, Principal Energy Economist
Sector Advisory Service Cluster–Energy Sector Group

BUSINESS
OPPORTUNITIES



Key Energy Challenges in Asia and the Pacific



Energy Access

- 350 million people remain without adequate supply
- 155 million still have no access to electricity
- 1.67 billion people without access to clean cooking



Energy Security

- Doubling of electricity demand by 2040 projected
- Renewable energy investments to reach \$1.3 trillion annually by 2030
- Current annual T&D investment \$1 trillion



Environmental Sustainability

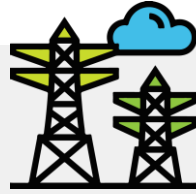
- Most vulnerable to climate change
- 50% of global GHG emissions from Asia-Pacific
- Fossil fuels dominant in the region (75% in 2019)
- 37% of the global CO₂ emissions from power industry
- 40% of CO₂ emissions from coal power generation



Sector Governance

- Regressive and outdated sector regulation and governance
- Subsidies and financial incentives to be re-considered
- Private sector participation needed to meet massive investment requirements

Opportunities and Changing Energy Landscape



Energy Landscape

- Profound changes in Asia and the Pacific
- **Fast-falling cost of renewable energy** vs. conventional energy
- Emerging new and innovative **low-carbon energy** technologies
- Maturing digital and smart technologies



Global Commitments

- Global commitments to universal access and climate action
- Sustainable Development Goal 7: **Universal Energy Access by 2030**
- Paris Agreement: **Nationally Determined Contributions (NDCs)**



ADB's Commitments

- ADB to be Asia and the Pacific Climate Bank
- **\$100 billion of cumulative climate finance by 2030** from own resources
- At least **75% of operations to support climate action** for the period 2019 to 2030

Energy Sector Operations Guiding Principles

Increased deployment
of renewable energy
and energy efficiency

Integration of advanced
technologies,
innovative business
models, and financing
instruments

Creating and enabling
regulatory frameworks
for effective market and
sector development

**GLOBAL
COMMITMENTS TO
UNIVERSAL ACCESS
AND CLIMATE ACTION**

SDG 7: Universal Energy Access
by 2030

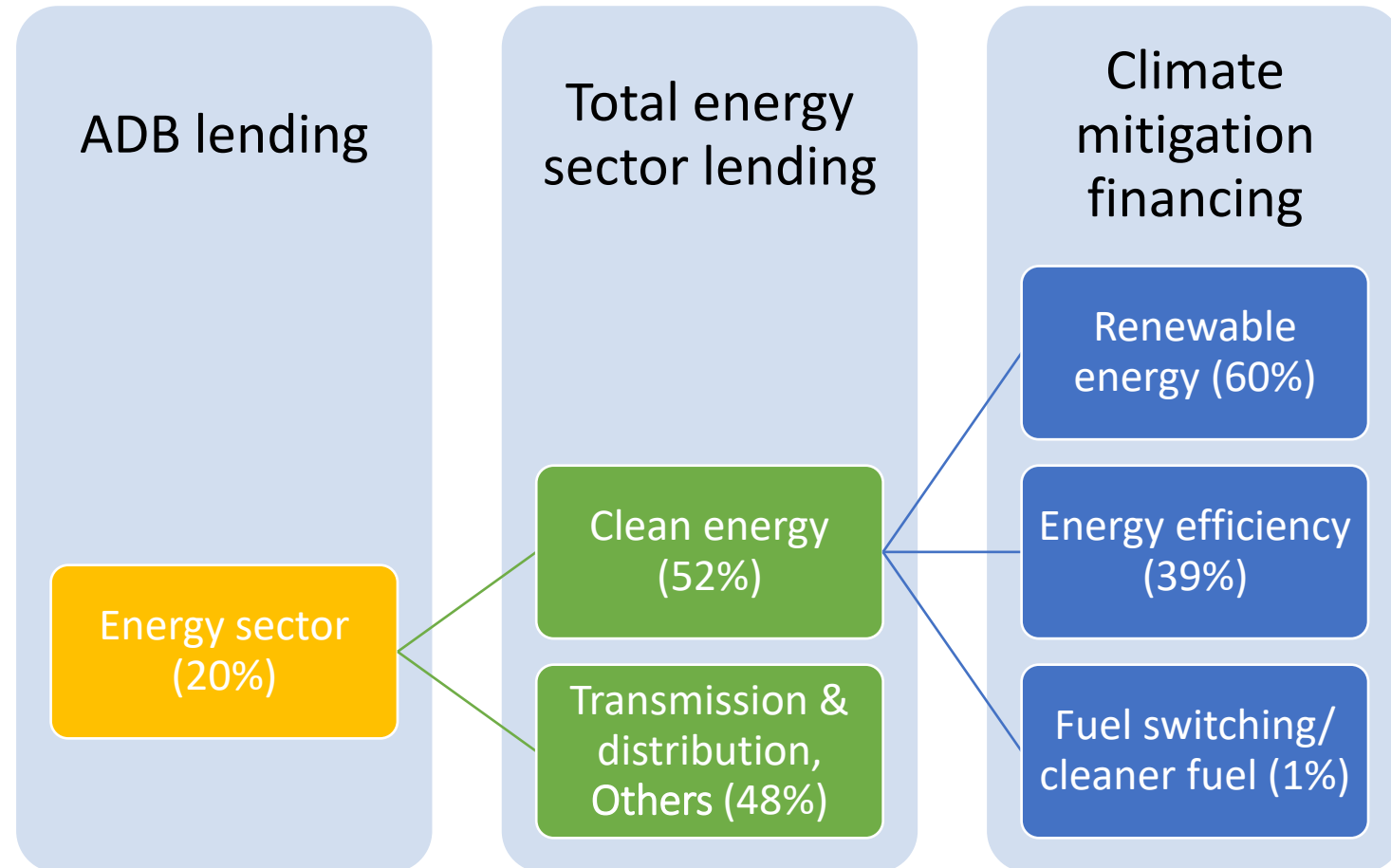
Paris Agreement: Nationally
Determined Contributions
(NDCs)

ADB STRATEGY 2030

7 Operational Priorities

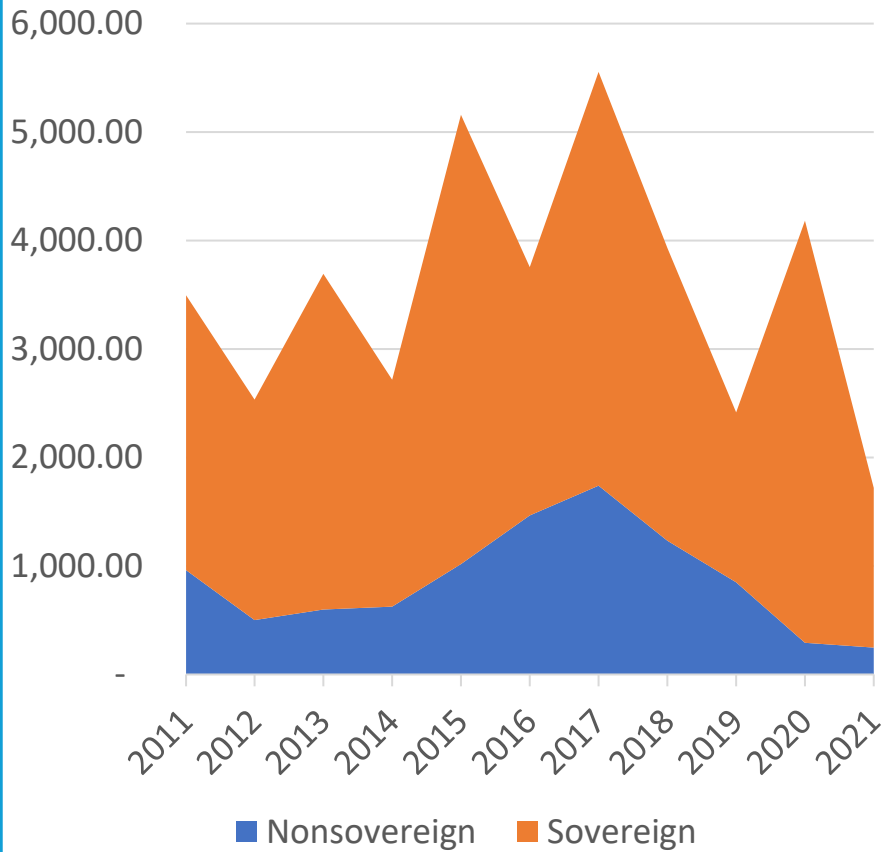
Energy Sector Portfolio, 2011–2021

(annual average share)

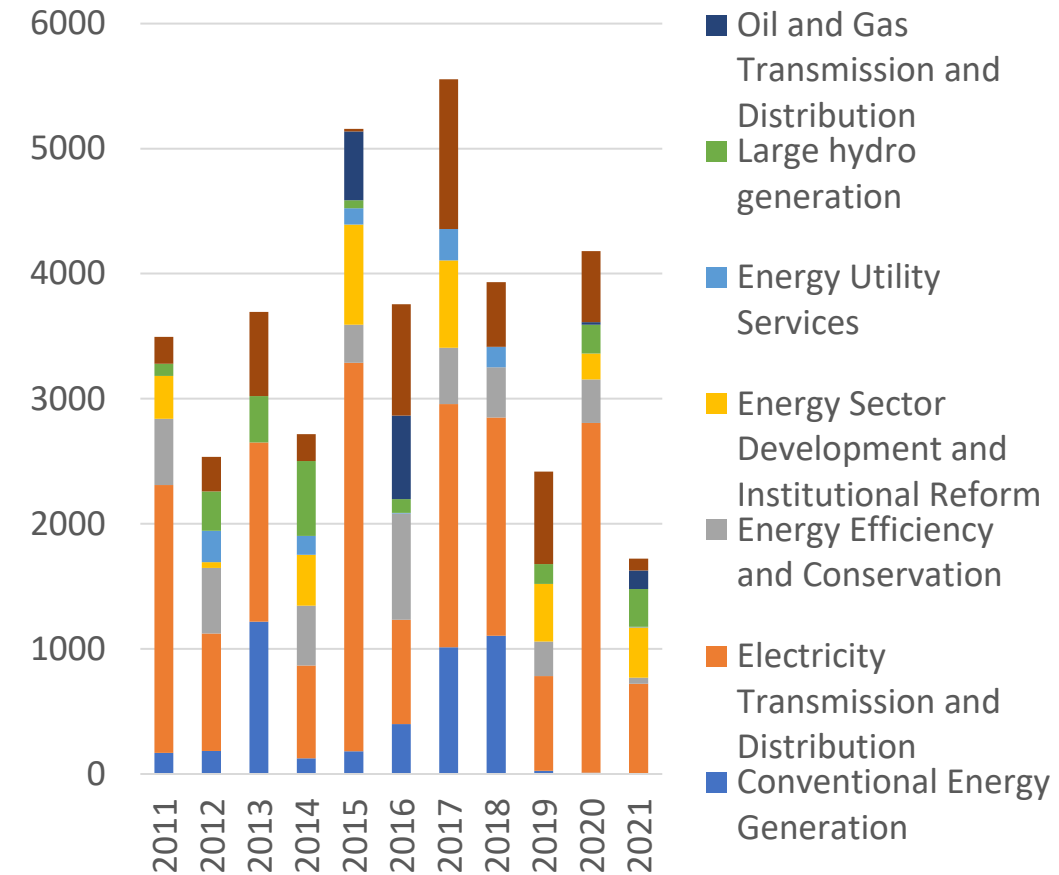


Energy Sector Portfolio, 2011–2021

Energy Sector Lending by Operations, 2011-2021



Energy Sector Lending by Subsector, 2011-2021



ADB's 2021 Energy Policy - Principles

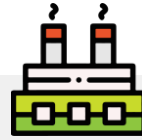
Supporting Low-Carbon Transition in Asia and the Pacific



Principle 1.
Securing Energy for a
Prosperous and
Inclusive Asia and
the Pacific



Principle 2.
Building a
Sustainable and
Resilient Energy
Future



Principle 3.
Supporting
Institutions, Private
Sector Participation
and Good
Governance



Principle 4.
Promoting Regional
Cooperation and
Integration



Principle 5.
Integrated Cross-
Sector Operations to
Maximize
Development Impact

Areas of Delivery

Decarbonization

Decreasing
consumption

Digitalization

Decentralization

Examples of ADB's Clean Energy Projects

Financial Intermediation Loan in Sri Lanka:

- \$50 million credit line, through the government, to multiple local banks for financing of rooftop solar PV systems

National Climate and Green Finance Facility in Indonesia:

- Working with PT SMI – a national financing entity – to design a \$150 million green finance facility, under the broader SDG Indonesia One platform

Private Sector Loan in Thailand:

- First project to integrate utility-scale wind power generation with battery energy storage in the country. ADB provided long-term financing of \$240 million

Sovereign Project Loan for Mongolia:

- \$100 million loan for the first Utility-Scale Energy Storage Project to support decarbonization and help increase renewable energy use by providing a large energy reserve, load shifting capacity, and emergency backup

Grant Support to Kiribati:

- \$8 million grant for the South Tarawa Renewable Energy Project – ADB's first project in Kiribati's energy sector – to install climate-resilient solar power capacity on a water reserve

Energy Sector: The Way Forward

Increase clean energy investments

- Help develop and demonstrate viability of new renewables beyond solar PV and onshore wind in ADB DMCs
- Develop projects with other sectors to reap scale and scope economies in energy efficiency

Support for more flexible, resilient and smarter energy systems

- Support the deployment of ICT, digital applications, and energy storage in the T&D subsector

Strengthen multi-sectoral approach

Indicative Clean Energy Projects for 2021–2023 (1 of 2)

AFG: Renewable Energy Development (Solar and Wind) Project

BAN: Renewable Energy Project

CAM: Energy Efficiency Sector Development Program

CAM: Energy Efficiency Sector Development Program

BAN: Renewable Energy Development and Efficiency Improvement Project

BHU: Renewable Energy Project

BHU: Hydropower Rehabilitation Project

PRC: Low Carbon Transformation in Urban Areas

PRC: Shanxi Low-carbon and Beautiful Village Development

IND: Scaling Up Demand Side Energy Efficiency Sector Project-Additional Financing

Indicative Clean Energy Projects for 2021–2023 (2 of 2)

INO: Geothermal Power Expansion Project (formerly Geothermal Power Generation Project (Phase 2))

INO: Sustainable Transition Project - DAMRI E-buses

KIR: South Tarawa Renewable Energy Project (Phase 2)

MON: Supporting Renewable Energy Development

MON: MFF Smart grid system development

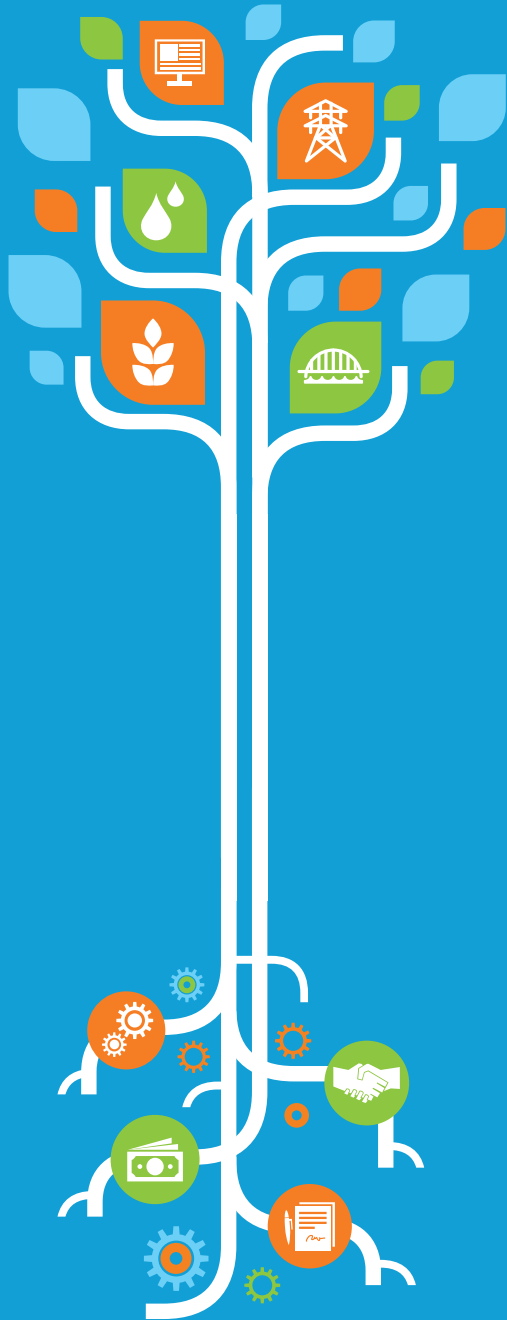
MON: MFF Smart grid system development (Tranche 1)

FSM: Renewable Energy Development Project, Phase 2

SAM: Alaoa Multi-Purpose Dam Project

TON: Nukualofa Electricity Network Project (Solar Plus Project)

TUV: Increasing Access to Renewable Energy Project - Phase 2



Thank you!

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