

Financing the 2030 Energy Transition

ADB's Approach in Supporting Low Carbon Development

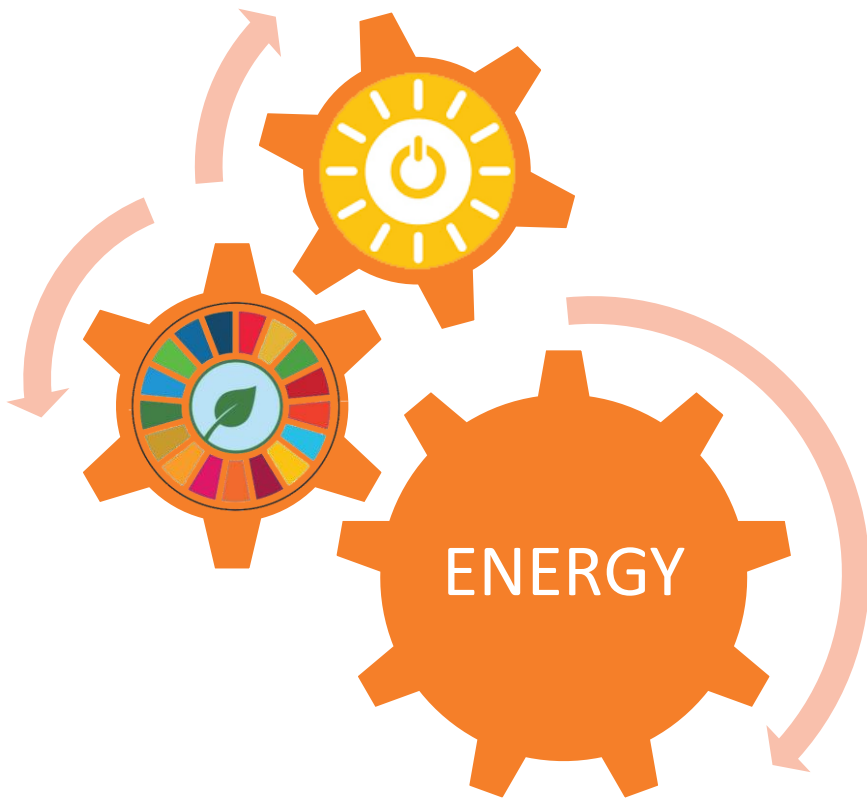
Workshop on SDG 7 Implementation:
The National Expert SDG Tool for Energy Planning
and the Asia Pacific Energy/Resource Platform
19 March 2019, Bangkok



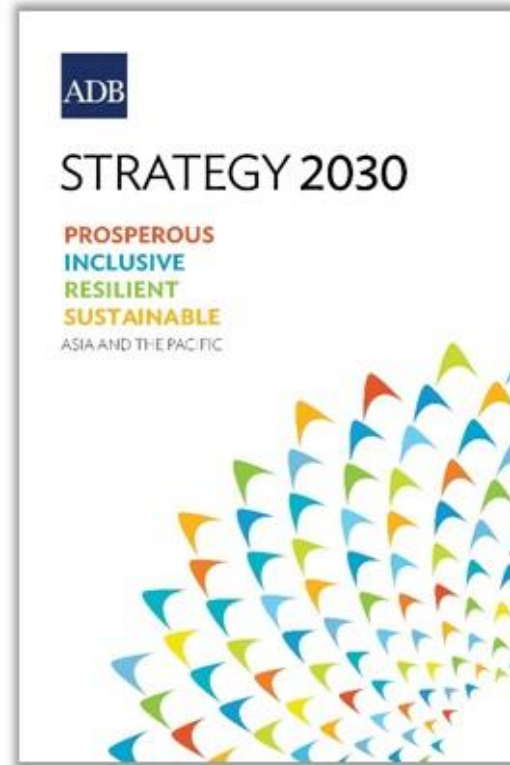


Content

- SDG7 and Paris Agreement, their Impacts on ADB Operations
- ADB Climate Financing Targets and Modalities
- ADB's Endeavors through the Years
- ADB Strategy 2030 and its Seven Operational Areas



SDG7 and Paris Agreement, their Impacts on ADB Operations



Goal 7:
Ensure access to affordable, reliable, sustainable and modern energy for all.

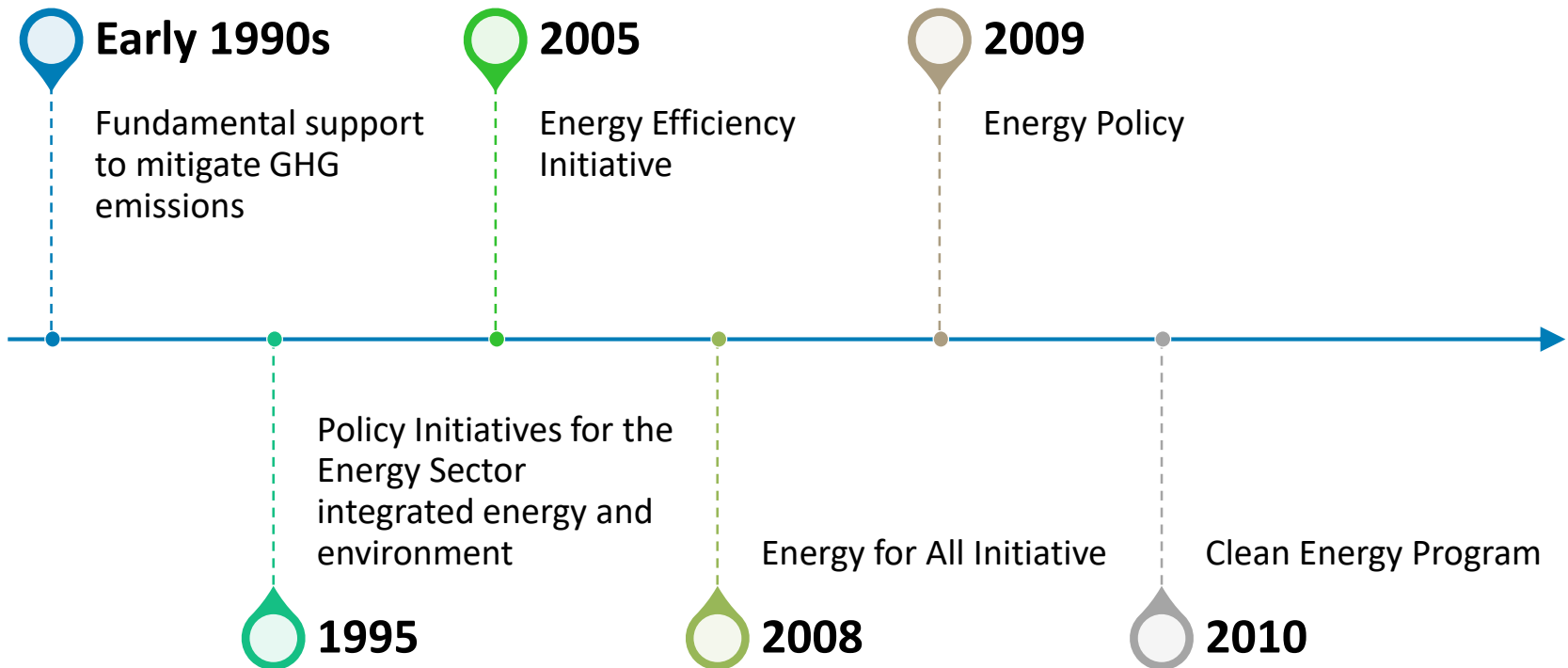


“At the heart of the two agendas lies ENERGY.”

UN Deputy Secretary General Amina Mohammed



ADB and Energy Sector





ADB Energy Policy

prioritizes **sustainable energy** and **low-carbon development**



Promoting clean energy development:
Renewable Energy &
Energy Efficiency



Maximizing access to energy for all
especially the rural poor



Policy reform in energy sector to
support low-carbon
development



Implementation of Nationally Determined Contributions under the Paris Agreement¹

Impacts on the ADB developing member countries (DMCs):

- Implies increased demand for **renewable energy**
 - RE generation: 1,752 TWh (2014) to 4,470 TWh (2030)
 - RE share in the power mix: 21% (2014) to 31% (2030)
- Requires huge investments in the energy sector
 - At least \$321 billion per year, or \$4.8 trillion through 2030 in the power sector of 32 ADB DMCs
- Presents opportunities for investments **in low-carbon technologies** and **energy efficiency** to complement RE investments



Implementation of Nationally Determined Contributions under the Paris Agreement¹

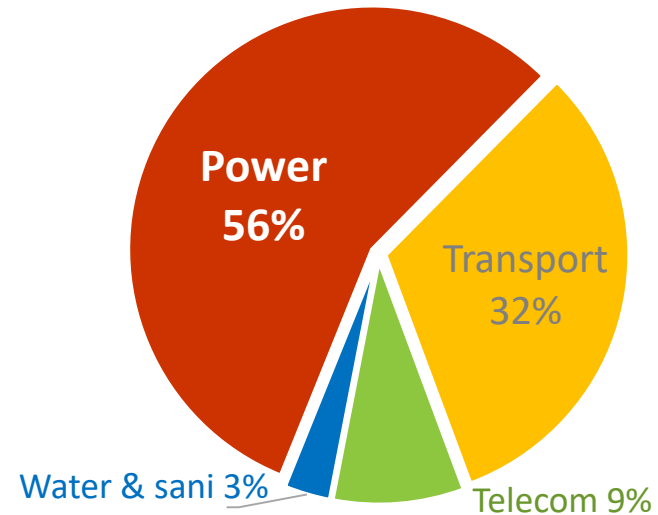
Six Key Areas to meet the set NDC targets:

- Meeting the needs of renewable energy growth
- Reducing the growth of coal and its impact
- Improving energy efficiency in demand sectors
- Promoting low-carbon technology transfer and deployment
- Promoting access to climate finance
- Establishing enabling regulatory and policy frameworks

Asia's Infrastructure Needs²



- Developing Asia requires **\$26 trillion** investments for 2016–2030.
- The power sector needs half of it, **\$14.7 trillion**.

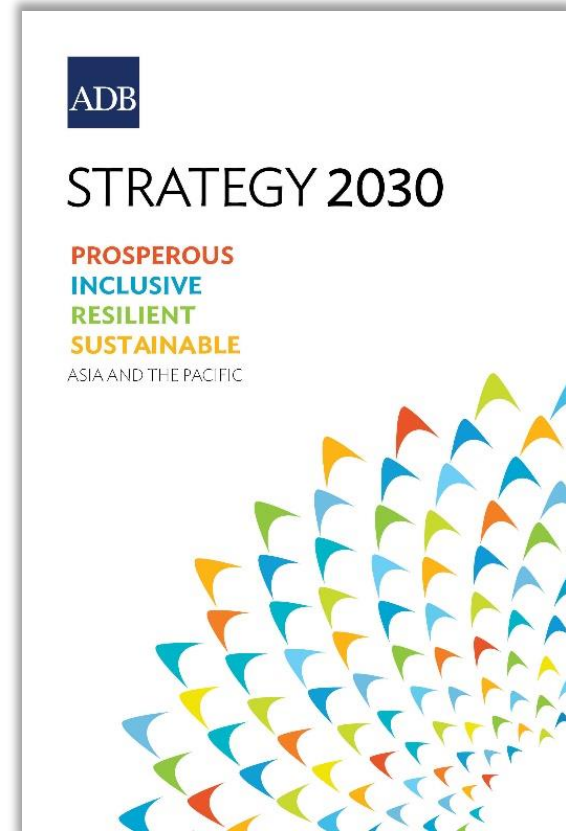


AVERAGE ANNUAL (2016–2030) in \$ billions	Required investment	How much is climate-related?	
		Adaptation	Mitigation
Power	982	3	200
Transport	557	37	0
Telecom	152	0	0
Water & sanitation	53	1	0
Total	1,744	41	200



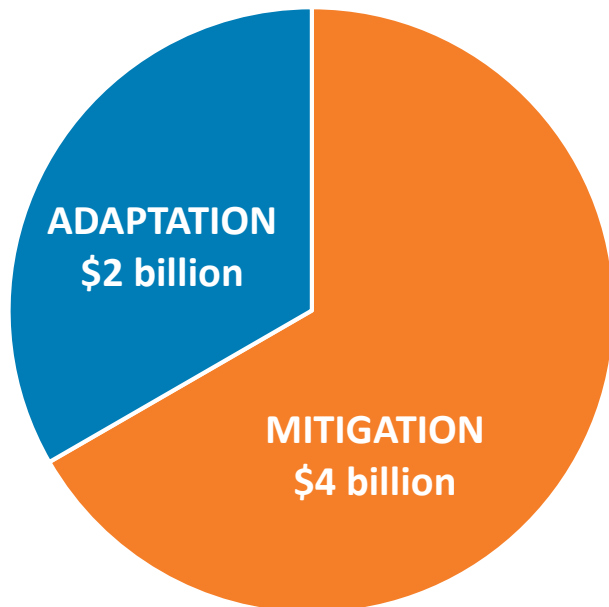
ADB Climate Financing Targets and Modalities

ADB Strategy 2030 Commitments³





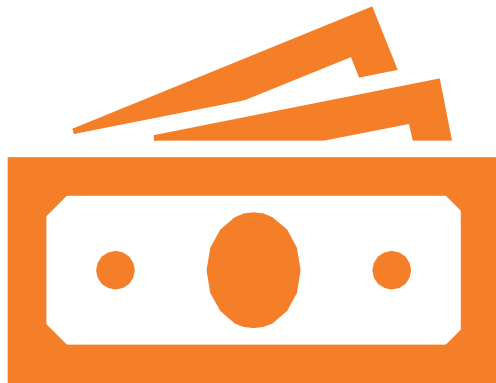
ADB Climate Finance Targets



- Scale up climate financing to \$6 billion annually by 2020
- DMCs' transition to low carbon and climate-resilient economies
- New and advanced technologies to achieve the targets



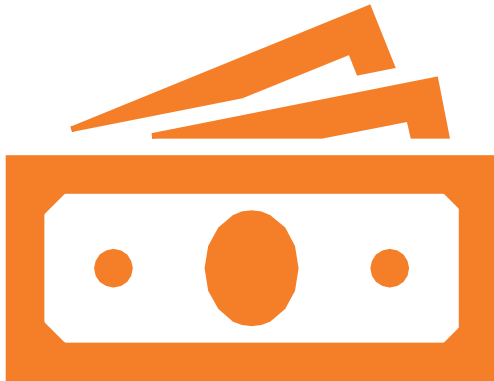
ADB Financing Modalities – Sovereign⁴



- **Grant** – investment (project or sector), policy-based (stand-alone or programmatic approach)
- **Guarantee**
- **Loan** – investment (project or sector), policy based (stand-alone or programmatic approach), financial intermediation, technical assistance, multi-tranche financing facility



ADB Financing Modalities – Nonsovereign⁵



- **Equity investments**
- **Loans and other debt instruments**
- **Guarantees of loans and other debt obligations** – including credit guarantees, political risk guarantees, and unfunded risk participations



ADB Lending



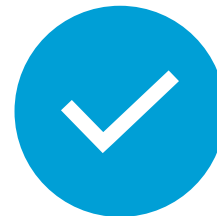
More private sector investment



Knowledge operations to provide financing, knowledge solutions, and leverage



Growing share of private sector financing; non-sovereign lending will grow to 22% by 2019 from 17% currently



In 2017, private sector operations accounted for 40% of clean energy lending



ADB's Endeavors through the Years

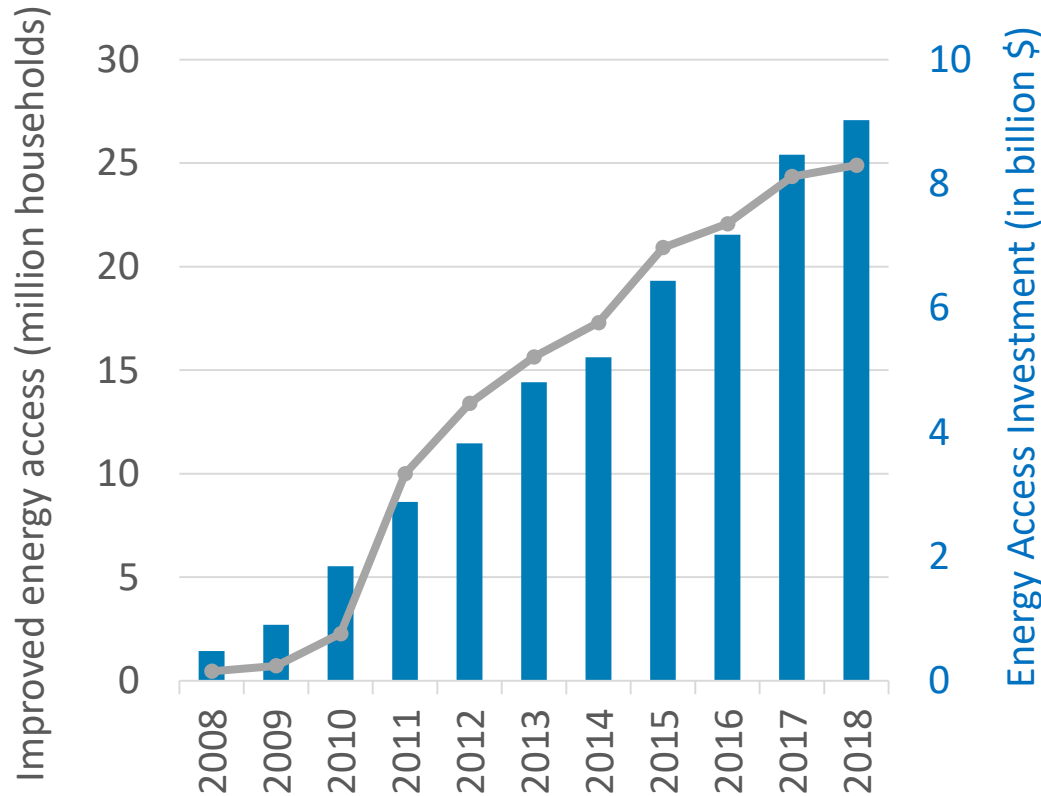


2018 Energy Sector Lending by Area

AMOUNT (\$ millions)	Central & West	East	Pacific	South	Southeast	Private Sector	TOTAL
Climate adaptation	-	-	2	35	-	-	37
Climate mitigation	135	400	2	273	101	477	1,388
Other	823	40	20	667	198	757	2,505
Total	958	440	25	975	299	1,233	3,931

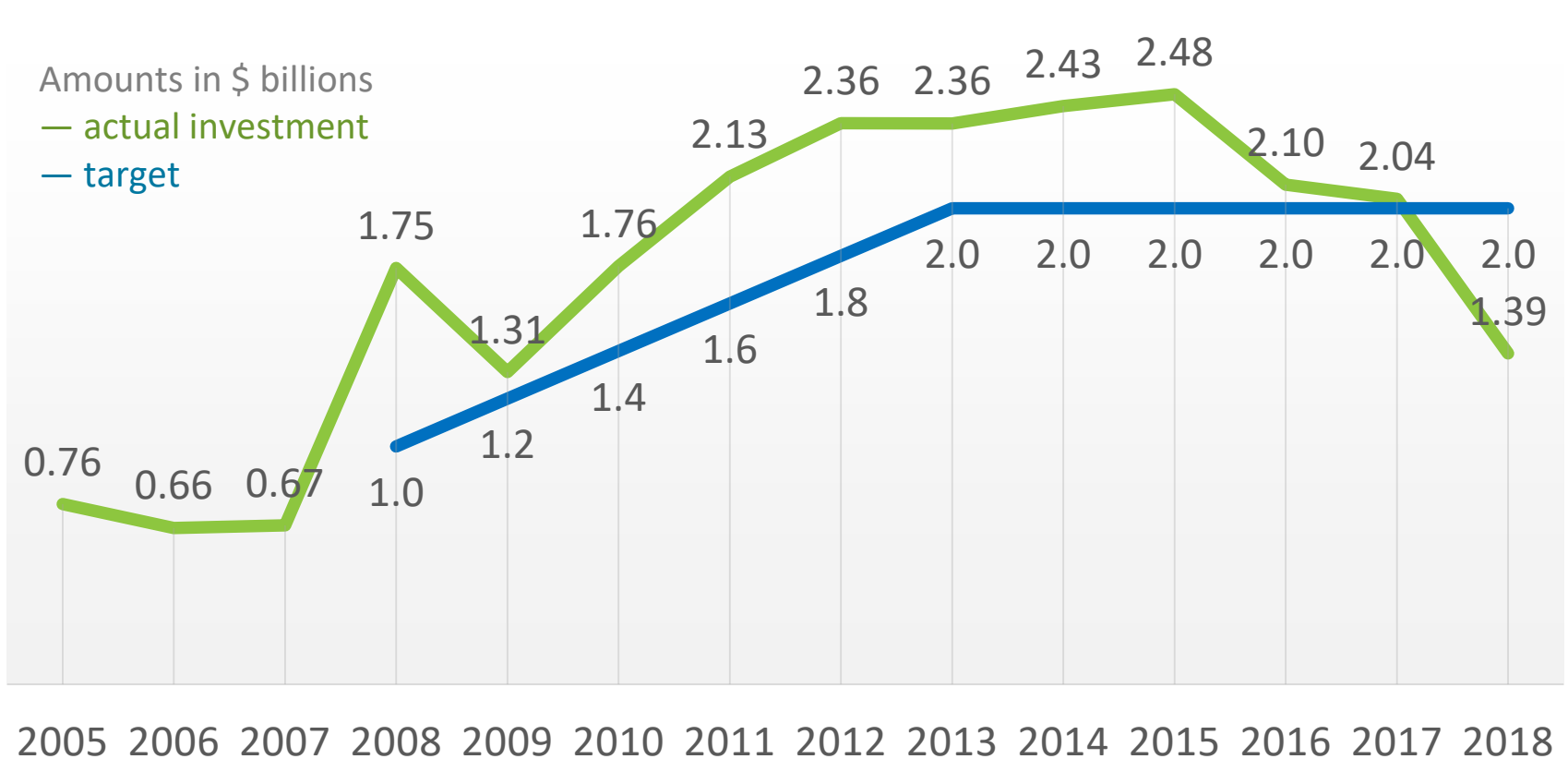


Energy for All Program Implementation progress



- **\$ 9.0 billion** total ADB investments in energy access from 2008 to 2018
- **24.8 million households** provided with modern and improved energy access from these investments

Clean Energy Program Implementation progress



Clean Energy Program

Implementation progress and other outcomes



Indicator	Unit	2011	2012	2013	2014	2015	2016	2017	2018
Investment amount	\$ Bn	2.13	2.36	2.36	2.43	2.48	2.51	2.04	1.39
Additional RE capacity installed	GW	0.87	2.46	1.39	2.06	0.62	2.06	1.56	0.58
CO2 emission reduction	million tons/year-eq	13.68	15.98	7.06	9.00	21.85	13.49	11.78	10.7
Electricity savings	TWh/year	3.29	0.87	1.99	0.07	4.48	4.69	0.74	3.98
RE electricity generation	TWh/year	3.30	4.91	5.22	5.93	1.48	4.62	4.80	2.38



Clean
Energy
Financing
Partnership
Facility
(CEFPF)
Cumulative
Progress
2008–2018

\$261.1 million (190 projects)

18.4 million tCO₂/year emission reduction

6.9 TWh-equivalent/year energy savings

1,653.8 MW installed renewable energy capacity

5.2 TWh/year renewable energy generation

\$28.1 million, available balance as of 31 December 2018.



Key Achievements in 2018

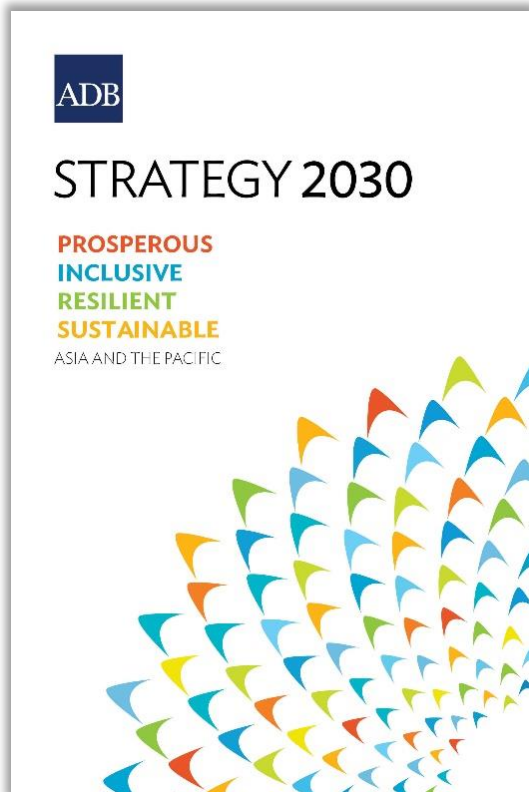
Strategic Operational Support

Adoption of advanced technologies

- Floating solar PV (AFG, AZE, KGZ)
- Battery energy storage system (PAK)
- Smart grid applications (INO, VIE, Transport)
- WTE applications in transport, power generation, and environmental improvement (PRC, RMI, PAK)

Leveraging clean energy investments — \$36.7 million (19 energy projects)

- 4.2 million tCO₂/year emissions reduced
- 268.1 MW additional RE capacity installed
- 318.7 GWh/year of electricity generated from RE sources



ADB Strategy 2030 and its Operational Areas



ADB Strategy 2030 Seven Operational Areas

- Addressing remaining poverty and reducing inequalities
- Accelerating progress in gender equality
- Tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability
- Making cities more livable
- Promoting rural development and food security
- Strengthening governance and institutional capacity
- Fostering regional cooperation and integration



3D Approach

- ADB has been implementing multi-sectoral approaches to address energy issues of the region by (i) providing innovative tailored technologies; (ii) demonstrating its feasibility through innovative financing solutions; and (iii) widely sharing knowledge and experience in the region
- **3D approach** can lead to a rapid roll-out of cutting-edge technologies

Deploy

- Framing challenges and identifying tailored technical solutions
- Appropriate deployment mechanisms are important for the enhanced effectiveness of the projects

Demonstrate

- Demonstrate successes through innovative pilots

Disseminate

- Widely share the experience and learning among countries

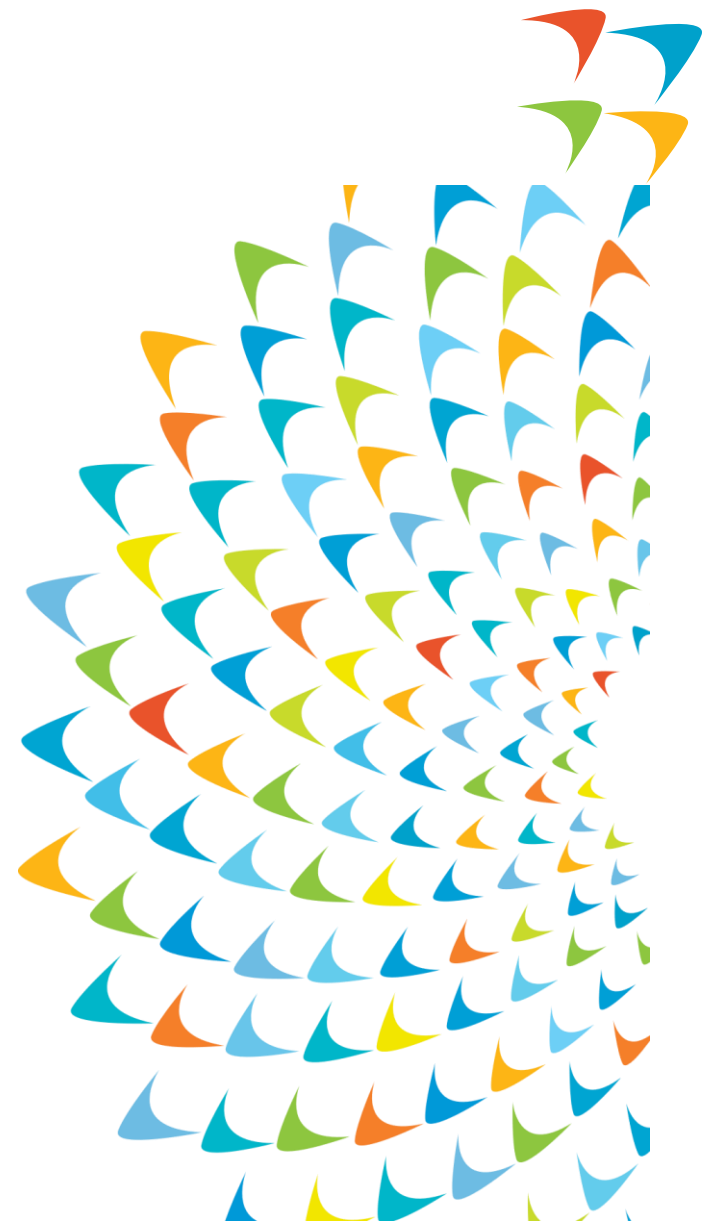
ADB Strategy 2030 - Energy Sector Interface



Operational Priorities	Energy Sector Contributions
Addressing remaining poverty and reducing inequalities	Clean energy for meeting basic needs (lighting and cooking); skills development and job creation with renewable energy; productive use of energy to generate income; solar home systems
Accelerating progress in gender equality	Clean energy access relieves women for fuel collection which allows women more time to pursue income-generating activities
Tackling climate change, building disaster resilience	Integrating climate change mitigation (GHG reduction) and adaptation into project design
Making cities more livable	Supporting smart electricity supply to cities, energy efficient buildings and electric vehicles, rooftop solar for household and commercial buildings
Promoting rural development and food security	ADB will support use of solar powered pumps for smart irrigation to replace diesel or electricity powered pumps
Strengthening governance and institutional capacity	Promoting energy sector reforms and developing institutional capacity for renewable energy development
Fostering regional cooperation and integration	Promoting energy connectivity (power interconnections, gas pipelines), and sharing best practices and technologies in renewable energy development

Thank you.

KEE-YUNG NAM
Principal Energy Economist



For more information



1. Zhai, Y., Mo. L., and Rawlins, M. 2018. The Impact of Nationally Determined Contributions on the Energy Sector – Implications for ADB and its Developing Member Countries. *ADB Sustainable Development Working Paper Series*. No.54. Manila: ADB
2. ADB. 2017. *Meeting Infrastructure Needs*. Manila.
3. ADB. 2018. *Strategy 2030: Achieving a Prosperous, Inclusive, Resilient and Sustainable Asia and the Pacific*. Manila.
4. ADB. 2014. *ADB Products and Financing Modalities for Sovereign Guarantees, Loans, and Grants*. Manila.
5. ADB. 2016. Nonsovereign Operations. *Operations Manual: Bank Policies and Procedures*. Manila.