

**CLEAN ENERGY FINANCING PARTNERSHIP FACILITY (CEFPF)/CLIMATE CHANGE
FUND – CLEAN ENERGY DEVELOPMENT COMPONENT (CCF-CE)¹
DESIGN AND MONITORING FRAMEWORK**

1. This document describes the design and monitoring framework (DMF) of the Clean Energy Financing Partnership Facility (CEFPF) and Climate Change Fund – Clean Energy Development Component (CCF-CE), complementary financing mechanisms developed to bolster the Asian Development Bank's (ADB) response to the dual issues of energy security and climate change confronting its developing member countries (DMCs) today. As in all its operations, ADB's approach to helping DMCs in this area is anchored in poverty reduction and pro-growth strategies leading toward sustainable development. In this regard, ADB recognizes and responds to the following opportunities and threats:

- (i) The unprecedented economic and population growth in the Asia and Pacific region consequently leads to rapid increases in the region's energy demand with unsustainable implications on the environment;
- (ii) The volatility of international oil prices places an additional, disproportionate burden on developing countries, encouraging oil importing countries to consider comprehensive approaches to energy security including short-term risks to economic growth;
- (iii) To address energy security, recent studies² suggest (a) aggressively pursuing energy efficiency to reduce energy consumption, (b) diversifying the energy portfolio, (c) managing market volatility, (d) managing reserve stock, and (e) developing macroeconomic policy frameworks including comprehensive plans to mitigate energy supply risks;
- (iv) Studies³ show that Millennium Development Goals targets cannot be met without modern energy services, thus, access to energy is a critical element to reducing poverty;
- (v) In the absence of energy services, the rural poor resort to traditional biomass use, resulting in higher incidences of health-related problems, especially affecting women and children;
- (vi) The preferred option for the poor is to replace the coal and kerosene more commonly used with liquefied petroleum gas, natural gas and electricity, as well as to use modern cooking stoves efficiently fueled by various biomass;
- (vii) The Asia and Pacific region expects profound impacts from rapid climate change, especially affecting its poorest population, and hindering long-term efforts to create a healthier, prosperous, and sustainable region;
- (viii) To significantly reduce and stabilize greenhouse gas (GHG) concentration levels in the atmosphere, the international community is advocating for (a) transforming the way energy is used, (b) promoting research and development, (c) financing the transition to cleaner energy, (d) managing the impact of climate change, and

¹ The Clean Energy Financing Partnership Facility and the Climate Change Fund – Clean Energy Development component share this Design and Monitoring Framework prepared in 2007. As part of CEFPF's efforts to remain timely and relevant, after three years of facility operations, a review and update of this DMF are currently being undertaken. This will enhance CEFPF's alignment with ADB's Strategy 2020, new Energy Policy, Climate Change Program and their corresponding performance indicators, as well as make CEFPF more responsive to the needs of ADB's client-DMCs.

² The World Bank. 2005. *Energy Security Issues*. Washington, DC.

³ Modi, V., S. McDade, D. Lallement, and J. Sagher. 2006. *Energy Services for the Millennium Development Goals*. Emergency Sector Management Assistance Program, United Nations Development Programme, UN Millennium Project: New York and Washington, DC. The World Bank.

- (e) tracking illegal logging;
- (ix) Recent studies⁴ show that that carbon dioxide emissions can be maintained at today's level of around 400 parts per million with firm policy decisions beginning with energy conservation and efficiency, avoiding excess consumption, wastage, and energy use;
- (x) While research continues, carbon emission reducing technologies are already available and must be transferred to developing countries; and
- (xi) Supporting policy decisions, enabling legislation, substantial finance, and private sector participation will be needed to effect meaningful change.

2. ADB's unique experience and regional sector knowledge enables ADB to effectively address energy security and climate change concerns through specific strategies and programs, including CEFPF and CCF-CE. It is important to note that, at the time of the development of its draft 2009 Energy Policy, ADB is mandated by its poverty reduction strategy and Strategy 2020 which identify energy as a core operational sector in driving its poverty reduction agenda. Strategy 2020 directs ADB to focus support on three distinct but complementary development agendas of the region: regional integration, inclusive economic growth, and environmentally sustainable growth, with addressing climate change a key component of this pillar. Specifically, ADB will further strengthen regional initiatives for mitigating and adapting to climate change due to Asia's rising contribution to carbon dioxide emissions.

3. ADB recognizes that energy plays a big role in addressing climate change, especially in terms of mitigation, given that GHG emissions from energy represent about half of all GHG emissions in Asia. Thus, the promotion of clean energy forms the foundation of ADB's mitigation work. Toward this end, ADB has targeted to achieve and maintain a \$1 billion clean energy portfolio in 2008 to 2010. ADB's Climate Change Program has likewise identified the scaling-up of the deployment and transfer of GHG reducing technologies motivated by the removal of barriers to these technologies, as well as financial and other incentives. Regarding financing climate change interventions, ADB identified that accessing, enhancing, and creating incentives was fundamental especially in terms of capital flows to cleaner forms of production in DMCs. Addressing investment barriers, official and concessional funding, and tapping both public and private sources of investment capital were specifically identified.

4. CEFPF and CCF-CE are also founded on ADB's energy policy. ADB's current energy policy was approved in 1995, and the 2009 Energy Policy is being finalized. The energy policy will focus on addressing the challenges faced by the sector—meeting energy security and transition to a low carbon economy towards achieving ADB's overarching poverty reduction objective. Specifically, ADB's energy sector operations will be based on three main pillars: (i) promoting energy efficiency and renewable energy (RE); (ii) maximizing access to energy for all; and (iii) promoting energy sector reform, capacity building, and governance.⁵

5. Recognizing that energy efficiency is one of the most effective ways of meeting energy demand, while addressing global warming challenges, ADB has emphasized both supply-side interventions and demand side efficiency. On the supply side, ADB will also pursue new and RE sources, diversifying the source of supply for incremental energy demand. ADB has likewise identified RE as a clear option for off-grid, community-based electricity supply. Rural communities will especially benefit from the development of RE sources that contribute to agricultural productivity, health, education, communications, small business enterprise, and

⁴ Scolow, R, and S. Pascala. 2006. *A Plan to Keep Carbon in Check*. Scientific American. September, New York.

⁵ ADB. 2008. *Energy Policy (Working Paper)*. Manila.

quality of life.

6. ADB will likewise support the development of RE grid systems that expand the reliability of power from RE sources. Presently, RE lacks the reliability needed for grid operations due to weather uncertainties and energy storage problems requiring back-up redundancy and energy, and discouraging RE use in standalone systems. In the interim, ADB will need to support the development of cleaner technologies utilizing fossil fuels to ensure access to energy and overall energy security. The main challenge hindering RE development and clean technologies with respect to coal is the former's affordability.

7. ADB is implementing CEFPP and CCF-CE to help provide financing to DMCs in achieving energy security and transitioning to low carbon economies through cost effective investments, especially in technologies, that result in GHG mitigation. CEFPP and CCF-CE likewise capitalize on ADB's comparative advantage in development policy dialogue with its DMCs, grounded in strong on-field presence and solid partnerships with DMC governments. Thus, it was conceived to finance policy and institutional reforms, as well as regulatory frameworks that overcome the barriers to, and encourage, CE development. Aggressive adoption of new technologies and sound policy will enable DMC's to "leapfrog" the environmental challenges of economic development and avoid committing to infrastructure that may eventually become obsolete. Both the CEFPP and CCF-CE target 70:30 grant component of investment to technical assistance ratio⁶ (per their individual Implementation Guidelines) to give preference to the demonstration and deployment of new technologies and capacity-building, facilitating their commercialization. CEFPP and CCF-CE embody ADB's commitment to be the Asia and Pacific region's catalyst for mobilizing greater financial flows and technology transfer to assist DMCs to achieve such leaps.

8. CEFPP and CCF-CE work together with other ADB programs to effectively address energy security and climate change. For instance, ADB's Energy for All program gives specific attention to DMC's sustainable rural electrification efforts to provide electricity and sustainable economic potential to rural populations. ADB's Carbon Market Initiative and Asia Pacific Carbon Fund, enhances the financial sustainability of energy efficiency with additional revenue from the Clean Development Mechanism. Finally, adaptation interventions under the ADB's Climate Change Program recognizes the need to reduce vulnerability to climate change, and that mitigation measures cannot prevent the climate changes that will occur in this century because of today's atmospheric concentration of GHG.

9. Overall, CEFPP and CCF-CE are part of ADB's comprehensive strategy to respond to the growing demands of its DMCs for policies, institutions, and investments that can achieve environmentally sustainable economic growth.

⁶ In computing CEFPP/CCF-CEs GCI:TA ratio, "GCI" comprises GCIs and TALLs taken together, while "TA" comprises TAs and DCs taken together.

Table 1: CEFPF/CCF-CE's Design and Monitoring Framework

Design Summary	Performance Targets/Indicators	Data Sources/ Reporting Mechanisms	Assumptions (A) and Risks (R)
Impact			
Improved energy security in DMCs and decreased rate of climate change	<p>Average CO₂ emissions per GDP in DMCs maintained or decreased by 2% to 5% by the year 2020</p> <p>Fuel imports reduced by xx% to xx% in target DMCs by 2020⁷</p> <p>Utilization of indigenous energy resources increased by xx% to xx% by 2020 (footnote 7)</p>	<p>(a) Primary: Energy Statistics in Asia & the Pacific (ADB) or IEA</p> <ul style="list-style-type: none"> • World Energy Outlook • IEA Statistics • Key World Energy Statistics <p>(b) Secondary: Ministry of Energy and Power or equivalent in DMC</p>	<p>A: Countries have reasonable oil supply policy</p> <p>A: DMCs are committed to prioritizing RE/CF/EE technologies to address energy security and climate change</p> <p>A: DMCs have secure access to the supply of new RE/CF/EE technologies</p> <p>A: GDP in DMCs is maintained or improved</p>
Outcome			
Increased use of clean energy	<p>RE share in energy mix increased by 2% to 5% in priority DMCs by 2020.</p> <p>Energy intensity (i.e., energy usage per unit of GDP) decreased by 2% to 5% in priority DMCs by 2020.</p>	<p>(a) Primary: Energy Statistics in Asia & the Pacific (ADB) or IEA</p> <ul style="list-style-type: none"> • World Energy Outlook • IEA Statistics • Key World Energy Statistics <p>(b) Secondary: Ministry of Energy and Power or equivalent in DMC</p>	<p>A: At least one RE/EE technology is accessible and affordable for each DMC</p>

ADB = Asian Development Bank, CO₂ = carbon dioxide, CEFPF = Clean Energy Financing Partnership Facility, CF = cleaner fuel, CCF-CE = Climate Change Fund – Clean Energy Development component, DMF = design and monitoring framework, DMC = developing member country, EE = energy efficiency, GDP = gross domestic product, IEA = International Energy Agency, RE = renewable energy.

⁷ Quantitative targets for fuel import reduction and indigenous energy utilization were originally planned to be reflected in the DMF update. As of this writing, more appropriate and practical indicators are proposed to replace these indicators in the draft DMF update which will be discussed and finalized with the financing partners at the 2011 Annual Consultation Meeting.

Table 1 – continued

Design Summary	Performance Targets/Indicators	Data Sources/ Reporting Mechanisms	Assumptions (A) and Risks (R)
Outputs			
1. CE investments in DMCs increased	Amount of CE component in ADB investments increased to at least \$1 billion by 2008 and maintained through 2010	ADB PPIS database	A: Project approvals versus disbursements are counted as investments
2. Deployment of new technologies with strong demonstration effect facilitated	3 new RE/CF/EE technologies deployed in DMCs by 2010	See a, b, and c directly below	A: Projects are generating and systematically using lessons toward scaling-up and/or replication
3. Barriers to new technologies lowered	5 national and local policies enabling CE development in DMCs by 2010	(a) ADB project documents: concept clearance paper, TA, RRP, PPR, TPR, PCR, and TCR (b) Progress updates and final reports for DC (c) Appropriate ministries in DMCs involved in the project	A: Major barriers to adopting CE technologies are identified and prioritized A: The development of national and local policies is coordinated with ADB
	At least 3 financing models suitable for bundling small CE investment projects used in DMCs by 2010	See a, b, and c directly above LFIs in DMCs involved in the project	
	Knowledge/information-education-communication products and capacity-building services promoting and enabling CE development provided to DMCs by 2010	See a, b, and c above	A: Knowledge products and capacity services are effectively targeting policy and decision makers

ADB = Asian Development Bank, CE = clean energy, CF= cleaner fuel, DMC = developing member country, DC = direct charge, EE= energy efficiency, LFI = local financial institution, PCR = project completion report, PPR = project performance report, PPIS = Project Processing Information System, RE = renewable energy, RRP = report and recommendation of the President, TA = technical assistance, TCR = technical assistance completion report, TPR = technical assistance performance report.

Table 1 – continued

Activities and Milestones (for years 2008–2010)	Inputs (for years 2008–2010)
<p>1.1 Pool grants from multilateral and bilateral sources</p> <ul style="list-style-type: none"> • Promote CEFPPF to the multilateral and bilateral donor community • Build and maintain network of financial partners • Secure at least \$250 million equivalent in combined multidonor and single donor funds • Maintain relations with financing partners through annual consultation meetings, as well as submission of annual work programs, annual reports, semiannual progress reports <p>1.2 Explore and develop innovative investment programs and financing mechanisms</p> <ul style="list-style-type: none"> • Engage expert services to develop innovative investment programs and financing mechanisms • Develop new and innovative investment programs and financing mechanisms • Implement investment programs and financing mechanisms in priority DMCs • Monitor and evaluate results of programs and financing mechanisms • Use lessons to innovate for more effective investment programs and financing mechanisms 	<ul style="list-style-type: none"> • At least \$250 million for CEFPPF/CCF-CE to facilitate investments • 12 person-months of ADB professional staff • 48 person-months of domestic consultants • 60 person-months of international consultants • ACEF • 2–3 technical studies • 4–5 workshops
1.3 Finance proven investments in smaller energy efficiency projects	
1.4 Finance investments that increase the percentage of people with access to CE in rural and urban areas	
2.1 Finance technology transfer costs of pre-commercial (i.e., proven and ready for deployment) CE technology catalyzing mainstream adoption	
<p>3.1 Finance technical and capacity building programs for CE in DMCs</p> <ul style="list-style-type: none"> • Develop CEFPPF/CCF-CE Implementation Guidelines, and update as necessary • Initiate call for proposals/applications to the CEFPPF six times a year • Review and prioritize proposals per the CEFPPF Implementation Guidelines • Allocate available resources to finance 1.3, 1.4, 2.1, and 3.1 • Monitor and evaluate results of financed proposals 	<p>} Activities for 1.3, 1.4, 2.1, and 3.1</p>

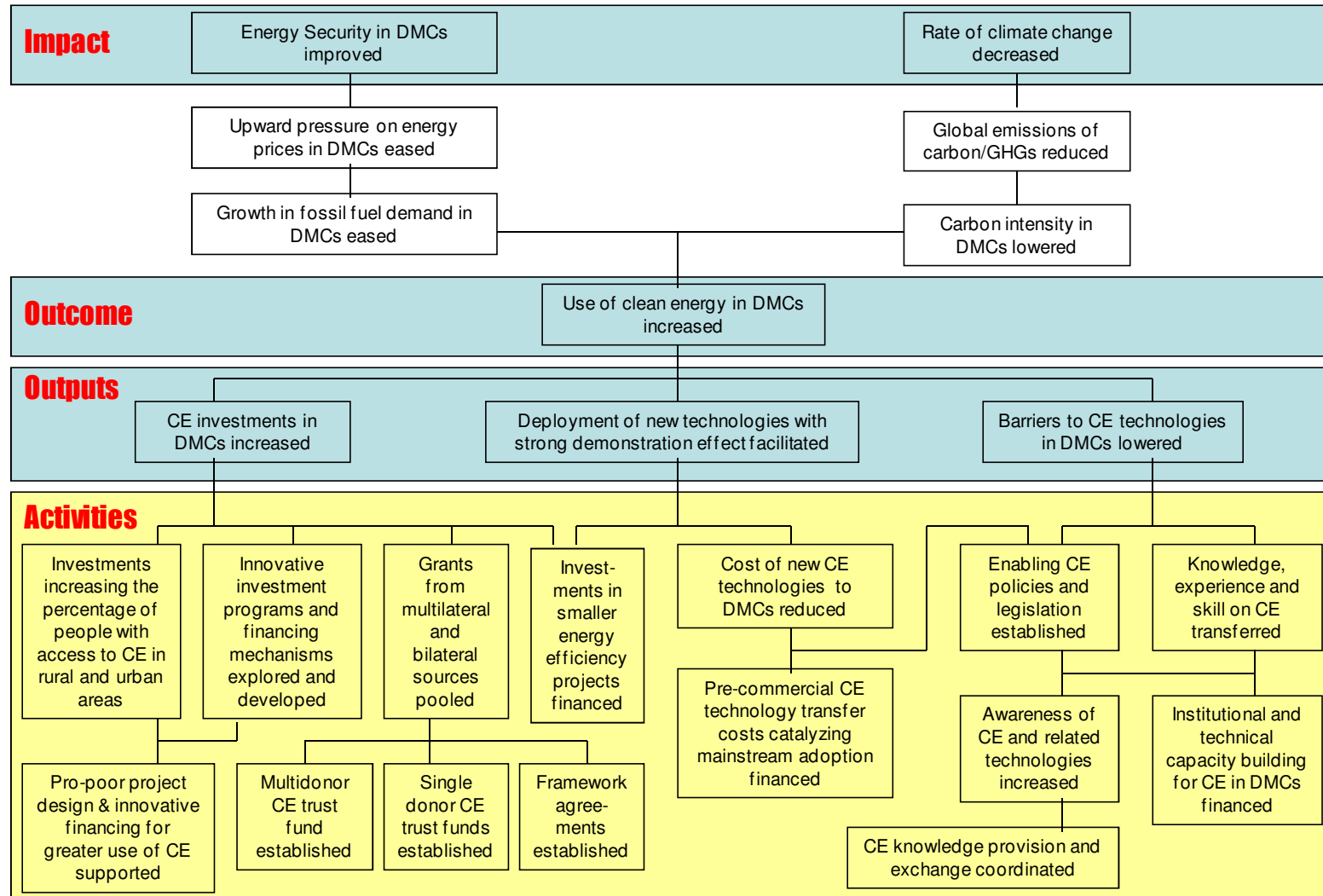
ACEF = Asian Clean Energy Forum, ADB = Asian Development Bank, CE = clean energy, CEFPPF = Clean Energy Financing Partnership Facility, CCF-CE = Climate Change Fund – Clean Energy Development component, DMC = developing member country.

Table 1 – continued

Activities and Milestones (for years 2008–2010)	Inputs (for years 2008–2010)
<p>3.2 Coordinate CE knowledge provision and exchange</p> <ul style="list-style-type: none"> • Disseminate lessons learned in project report documents and publications • Produce technical studies that enable the increased use of CE in DMCs (given available resources) • Network with other institutions to maximize information dissemination and acquisition on best practices, model templates and procedures, advocacy, and the like • Co-sponsor annual Clean Energy Forum • Engage and deploy expert services to operations departments to aid in project planning, design implementation, monitoring and evaluation, and adaptive management • Update technical and management capacity to support progressive CEFPP/CCF-CE implementation 	

CE = clean energy, CEFPP = Clean Energy Financing Partnership Facility, CCF-CE = Climate Change Fund – Clean Energy Development component, DMC = developing member country.

Figure 1: CEFPF/CCF-CE Results Chain



CE = clean energy, CEFPF = Clean Energy Financing Partnership Facility, CCF-CE = Climate Change Fund – Clean Energy Development component, DMC = developing member county, GHG = greenhouse gas.