



PRC = People's Republic of China.  
Source: ADB.

The Asia and Pacific region is experiencing rapid growth in the demand for energy services as its population and income grow and countries industrialize. However, the steady increase in the consumption of conventional energy and traditional fuels in a "business-as-usual" manner has resulted in serious environmental and economic consequences at both the local and global levels.

Greater use of clean energy, including renewable energy (RE), and increased efficiency in energy use is critical if Asia is to maintain its current rate of economic growth. The Asian Development Bank (ADB) has been working to address these issues for the past two decades with some success. However, given the increased challenges of ensuring energy

security and the need to address environmental degradation and climate change, greater attention is being paid to clean energy and energy efficiency (EE) by countries in the region. ADB recognizes the importance of encouraging this trend and has highlighted managing the environment as one of its five strategic priorities under its current Medium-Term Strategy. Assistance to clean energy is one of the interventions identified in the strategic priority. To drive this agenda, and in line with the investment framework for clean energy developed as a response to the call by the Group of Eight (G8) for multilateral development banks, ADB has also put in place a Clean Energy and Environment Program supporting such efforts by its developing member countries (DMCs).

## Clean Energy and Environment Program (CE&EP)

CE&EP combines several previously existing initiatives with new efforts comprising the following:

- **Update of the Energy Policy**

ADB's Energy Policy, approved in 1995, emphasizes the acceleration of the widespread application of RE and EE in its DMCs. This focus was strengthened through ADB's Energy Policy Review of 2000 which states that, among other priorities, ADB will assist its DMCs in formulating and implementing viable RE and EE projects, preferably with private sector involvement for providing electricity in remote areas and improving the quality of life of the rural poor. ADB's Operations Evaluation Department is currently reviewing ADB's Energy Policy and the findings of the review will be included in the new energy strategy.<sup>1</sup> This strategy will place greater focus on energy security and climate change through promotion of cleaner, more efficient and less polluting sources and technologies, and greater use of indigenous forms of RE.

- **Energy Efficiency Initiative (EEI)**

EEI was launched in July 2005 to expand ADB's operations in clean energy to \$1 billion a year. ADB has prioritized People's Republic of China (PRC), India, Indonesia, Pakistan, Philippines, and Viet Nam as priority countries and is in the process of developing country strategies and action plans for promoting clean energy, and establishing a pipeline of investments. These activities will be completed by October 2007. ADB has also established the Clean Energy Financing Partnership Facility (CEFPF) in April 2007. It is designed to finance (i) smaller EE investments that require quick and efficient transactions; (ii) technology transfer costs of clean technologies for a small number of high demonstration impact, large interventions that will catalyze deployment of clean energy technologies; and, (iii) grant assistance for activities such as developing the knowledge base and incentive mechanisms, advocacy, institutional capacity building, project preparation, and establishment of the monitoring and evaluation mechanisms.

- **Carbon Market Initiative (CMI)**

The CMI, approved in November 2006, is another concrete effort to deepen ADB's commitment to clean energy and climate change mitigation. It provides financial and technical support to developers and sponsors of projects with greenhouse gas mitigation benefits that can qualify as an eligible Clean Development Mechanism project under the Kyoto Protocol. As part of the CMI, the Asia Pacific Carbon Fund, a trust fund established and managed by ADB on behalf of fund participants, will provide up-front funding against the purchase of an estimated 25%–50% of future carbon

credits expected from projects. In addition, the initiative will provide grant-based technical support for preparation and implementation of eligible projects as well as marketing support for additional carbon credits.

- **Sustainable Transport Initiative (STI)**

Transport is currently the largest contributor to greenhouse gas emissions in Asia and is the fastest growing sector in terms of contributions. ADB's report on Energy Efficiency and Climate Change Considerations for On-road Transport in Asia (ADB 2006) highlights actions required for sustainable and energy efficient transport. Apart from this report, relatively limited attention has been given so far to the formulation of dedicated policies to reduce the growth in greenhouse gas emissions from the transport sector in Asia. Asia is at a cross roads. Motorization is still at low level, but increasing rapidly. Action is required to develop sustainable and energy efficient modes of transportation to move people and goods, not vehicles. ADB is actively involved in sustainable urban transport and is currently undertaking regional technical assistance to assess efficient mobility options for Asian cities, as well as several studies to promote energy efficient transport systems (Ho Chi Minh City, Hanoi, Karachi, and Lahore). The STI will develop a coherent investment and development framework to deliver modalities for effective and efficient transportation systems.

- **Energy for All**

ADB is working to specifically look at modalities, financial instruments and mechanisms needed to catalyze and mobilize financial and private sector entities to increase access to modern forms of energy to the poor. It also seeks to identify approaches that can be replicated and scaled up to be components of ADB loans.

A regional technical assistance (RETA) on Energy for All is underway. It will be implemented over a two-year period commencing in April 2007 and ending in March 2009 in 2–3 selected DMCs.

- **Knowledge Hubs**

ADB is also establishing regional knowledge hubs to act as think tanks for ADB and its DMCs on clean energy. The knowledge hubs will support and strengthen Asia and the Pacific's capacity to generate innovative concepts, science, technology, and management development on clean energy. Initially, three knowledge hubs have been established: (i) The Energy Research Institute (TERI) in New Delhi, India for Clean Energy, (ii) Tsinghua University in Beijing, PRC for Climate Change, and (iii) Asian Institute of Technology in Bangkok, Thailand for 3R (reduce, reuse and recycle).

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<sup>1</sup> According to *Staff Instructions on Definition of Directional Documents and Processing of Policy and Strategy Papers*, stand-alone strategy papers will be prepared for the sectoral and thematic areas.

- **Renewable Energy, Energy Efficiency and Climate Change (REACH)**

REACH was launched in early 2002, by bringing together several funds provided by the Governments of Canada, Denmark, Finland, and the Netherlands. These funds, which later will be subsumed to CEFPPF, provide assistance to many of its DMCs to address policy, market, financial and structural barriers facing RE and EE, develop institutional capacity and technical capability of governments and local institutions. The interventions are aimed at developing innovative solutions that would lead to widespread commercial application of renewable and energy efficiency technologies and services that will also lead to a decrease in GHG emissions.

#### *Status of Clean Energy Investments*

These energy development and climate change mitigation initiatives have already led to increase in investments on clean energy. As an example, between 2000 and 2005, ADB's total investments on clean energy projects totaled almost \$720 million. These include a \$161 million Renewable Energy Development Project in Indonesia, a \$35 million Gansu Clean Energy Development Project in the PRC, and several private sector equity investments in funds targeting clean energy projects, including \$10 million in the China Environment Fund and the \$20 million invested in FE Clean Energy Sub-Fund. In 2006 alone, ADB's clean energy investments totaled about \$700 million. The pipeline for 2007 is \$900 million and \$1.9 billion for 2008–2010. Clean energy projects include installation or retrofitting of facilities to use energy-efficient technologies, generate renewable energy and use clean fuels. These also include electricity transmission and distribution facilities.

- **Adaptation**

In addition, ADB recognizes the importance of enhancing its DMC's capacities to adapt to increasing climate change risks. In particular, Small Island Developing States (SIDS), arid lands and coastal cities of the Asia and Pacific region are especially vulnerable. To this end, ADB is working in partnership with its DMCs and bilateral and multilateral organizations, with such efforts expanding:

#### *Regional and Subregional Cooperation*

Many of the concerns raised by climate change can best be understood and addressed at the regional or subregional levels. ADB's Climate Change Adaptation Program for the Pacific worked with the Pacific SIDS to examine the special risks they face and identified adaptation approaches and measures for example, "climate proofing" coastal infrastructure investments. The ADB-led Central Asian

Countries Initiative for Land Management brings together the five countries of that region to address land degradation problems, some of which are exacerbated by climate change. In the Greater Mekong Subregion, ADB is sponsoring an analysis of climate change on natural resources productivity, and discussions are underway with World Bank to undertake a joint analysis of the impacts of climate change on Asia's coastal megacities. We are also working to integrate climate change risk considerations into our disaster preparedness support in the region.

#### *National Adaptation Support*

ADB is increasingly integrating adaptation considerations into its strategic planning processes at the country level. Climate change risks are now being considered as part of the process whereby ADB and its DMCs develop Country Partnership Strategies governing ADB's programs. We are also taking measures to reconfigure sector development plans so that they are more resilient to climate change. More directly, we are organizing to provide greater support for national climate change adaptation planning and programming efforts.

#### *Mainstreaming Adaptation into Project Design*

Project design needs to include due consideration of the risks associated with climate change, and ADB is expanding its efforts to ensure that this information is included in project planning and implementation. We begin to test both the methods of such analysis as well as approaches to better adapt to climate change during project implementation. For example, ADB's Poverty and Environment Program has supported several pilot activities conducted to develop innovative adaptation approaches. In Viet Nam, recommendations drawn from a pilot activity examining traditional coastal community approaches to disaster vulnerability reduction are being applied to the development of a \$135 million coastal development project.

ADB expects to increase its assistance to its DMCs with financial resource mobilization to support adaptation efforts. As an executing agency of the Global Environment Facility (GEF), ADB is positioned to tap resources from the three GEF-administered climate change adaptation funds as well as its own resources and other sources of financing.

### *Ad Hoc Activities*

From time to time, the CE&EP supports ad hoc activities. In 2006, it supported ADB's Clean Energy Week, which was held from 20–22 June 2006 at ADB headquarters, Manila, the Carbon Expo Asia from 26–27 October 2006 in Beijing, PRC and the Twelfth Conference of the Parties (COP12) to the UN Framework Convention on Climate Change from 6–17 November 2006 in Nairobi, Kenya. In 2007, it will support the Clean Energy Forum: Regional Policy and Finance Solutions scheduled for 25–28 June 2007 at ADB Headquarters in Manila. The forum will be an opportunity for project developers, the financial community and government representatives, to share information, identify and pursue financing opportunities, and to devise strategies to scale up clean energy investments. ADB will also sponsor the upcoming 2007 Methane to Markets Partnership Expo to be held in Beijing, PRC on 30 October–1 November 2007.

### *Program Management*

The Regional and Sustainable Development Department, in close collaboration with the Energy Community of Practice (CoP) and operations departments, will oversee the CE&EP.

Each subprogram or initiative has its own steering committee working group or project management unit that provides strategic guidance and/or a working group comprising ADB staff with specific expertise to oversee design and implementation.