

DEVELOPMENT COORDINATION

A. Major Development Partners: Strategic Foci and Key Activities

1. Achieving air quality objectives in the greater Beijing–Tianjin–Hebei (BTH) region requires a variety of interventions across multiple sectors, which will also facilitate medium- and long-term economic transformation. Consumption of coal and petroleum must decrease through expansion of cleaner energy, industrial process upgrades, more energy-efficient buildings, use of renewable energy for urban heating services, deployment of alternative-energy vehicles, promotion of public transportation, and better transportation management. Uncontrolled burning of agricultural waste must also decline. The Asian Development Bank (ADB) is well positioned to support such cross-sector operations, and since its assistance to the People’s Republic of China (PRC) began in 1986, the core sectors for operational support have been energy, transport, urban development, and agriculture. In the energy sector, ADB has provided more than \$5.88 billion of support, more than 50% of which was for projects in energy conservation, energy efficiency, and emission reduction. ADB has also provided more than \$17.8 billion to transport, \$5.33 billion to urban development, and \$4.68 billion to agriculture projects.

2. The greater BTH region has received financial support for air quality improvement and green development from development partners such as ADB, Agence Française de Développement (AFD), European Investment Bank (EIB), International Finance Corporation (IFC), KfW, and the World Bank, as shown in the table below.¹

Major Development Partners			
Partner	Project Name	Duration	Amount (million)
ADB	Beijing–Tianjin–Hebei Air Quality Improvement–Hebei Policy Reforms Program	2015–2016	\$300.0
	Air Quality Improvement of the Greater Beijing–Tianjin–Hebei Region–China National Investment & Guaranty Corporation’s Green Financing Platform	2016–2022	€458.0
	Qingdao Smart Low-Carbon District Energy Project	2016–2020	\$130.0
AFD	Green Credit Line	2007–2012	€120.0
EIB	China Climate Change Framework Loan II	2010–2016	\$500.0
IFC	China Utility-Based Energy Efficiency Finance Program	2006–2010	\$50.0
KfW	Green Finance Program	2008–2012	€75.0
	Beijing–Tianjin–Hebei Air Quality Improvement–Hebei Policy Reforms Program	2015–2016	€150.0
World Bank	Hebei Air Pollution Prevention and Control Program	2016–2020	\$500.0
	Air Pollution Control in Jing-Jin-Ji China	2016–2020	\$500.0
	China HCFC Phase-Out Project (Stage I)	2012–2017	\$73.0 ^a
	Energy Efficiency Financing Program	2011–2016	\$300.0

ADB = Asian Development Bank, AFD = Agence Française de Développement, EIB = European Investment Bank, HCFC = hydrochlorofluorocarbon, IFC = International Finance Corporation.

^a Grant from Montreal Protocol Investment Fund.

Source: Asian Development Bank estimates.

3. The World Bank has provided assistance for market-based energy conservation and efficiency investments under the China Energy Efficiency Financing Program, and also has a strategic long-term partnership with the Government of the PRC through the China Renewable

¹ The greater BTH region (referred to as the BTH region) includes Beijing and Tianjin municipalities; Hebei, Henan, Shandong, Shanxi, and Liaoning provinces; and Inner Mongolia Autonomous Region.

Energy Scale-up Program. These investments resulted in annual energy savings of three million tons of coal equivalent and greenhouse gas reductions of 7.3 million tons carbon dioxide equivalent per year (tCO₂e/y). IFC's China Utility-based Energy Efficiency Project has supported 217 loans in energy efficiency, renewable energy, coal-bed methane, and municipal solid waste for \$884 million, mobilizing \$2.2 billion in investment; total greenhouse gas emission reductions are estimated at 20 million tCO₂e/y. EIB is addressing climate change in the PRC through the China Climate Change Framework loan under the European Union–China Partnership on Climate Change.²

4. Under the Thirteenth Five-Year Plan, new financing initiatives for quality improvements in the BTH region were introduced beginning in 2015.³ In 2015, ADB approved the first policy-based loan with cofinancing from KfW (Beijing–Tianjin–Hebei Air Quality Improvement–Hebei Policy Reforms Program) that supported policy actions in Hebei,⁴ including (i) adjustment of the energy mix; (ii) promotion of public transportation; (iii) reduction of seasonal biomass burning and promotion of clean energy in rural areas; (iv) capacity development in environmental monitoring, administration, and supervision; and (v) employment promotion for inclusive industrial transformation. The World Bank approved its Program for Results—Innovative Financing for Air Pollution Control in Jing-Jin-Ji—in March 2016, to decrease coal consumption in the power industry and reduce air pollutants and carbon emissions through increasing energy efficiency and clean energy. In June 2016, the World Bank approved another Program for Results—Hebei Air Pollution Prevention and Control Program—to ensure that emissions from coal used in energy-efficient power plants are curbed through end-of-pipe measures and enforcement of emission standards. In 2016, ADB approved the second loan in its multiyear, multisector support program for air quality improvement in the BTH region, targeting better access to finance, especially for small and medium-sized enterprises (SMEs), to scale up investments in pollution reduction projects in the region.⁵

B. Institutional Arrangements and Processes for Development Coordination

5. ADB has established working relationships with the World Bank, KfW, EIB, and other multilateral and bilateral agencies to address policy issues and coordinate lending and technical assistance operations. Both ADB and the World Bank emphasize the importance of air quality improvement, environmentally sustainable growth, and climate change mitigation and adaptation. Cooperation between development partners occurs mainly through informal meetings and information exchange.

C. Achievement and Issues

6. Despite substantial efforts to improve energy efficiency, the PRC still has one of the largest unrealized energy efficiency potentials worldwide.⁶ Accelerated and sustained improvement of air

² The partnership was established in 2005 to strengthen cooperation and dialogue on climate change. Its major objective is to promote low-carbon energy technologies.

³ Government of the PRC. 2015. *The 13th Five-Year Plan for Economic and Social Development of the People's Republic of China, 2016–2020*. Beijing.

⁴ ADB. 2015. *Report and Recommendation of the President to the Board of Directors: Proposed Loan for the Beijing–Tianjin–Hebei Air Quality Improvement–Hebei Policy Reforms Program*. Manila.

⁵ ADB. 2016. *Report and Recommendation of the President to the Board of Directors: Proposed Loan for the Air Quality Improvement in the Greater Beijing–Tianjin–Hebei Region—China National Investment and Guaranty Corporation's Green Financing Platform Project*. Manila.

⁶ The International Energy Agency estimates that the average cost of conserved energy in the PRC is below \$220 per ton of oil equivalent and therefore far lower than, for example, in the Republic of Korea or Europe, where the average

quality in the BTH region, which includes some of the PRC's most energy-intensive and urban transport-intensive provinces, requires multi-pronged, long-term efforts for improving demand-side energy efficiency and switching to cleaner fuels. Multilateral development banks and bilateral development partners—including ADB, the World Bank, EIB, KfW, and AFD—have mobilized financing for several projects contributing to air quality improvements. However, the highly polluting, energy- and resource-intensive SMEs, which are a crucial part of the PRC's economy, have not been targeted by most of the investment operations. Industrial SMEs have the potential to improve energy efficiency by more than 25%.⁷ They generally consume more energy per unit of output than large enterprises in the same industry because they lack economies of scale, use outdated technologies, and have weak monitoring and enforcement practices as a result of their small size and the volume and dispersion of enterprises. SMEs also face some technical and financial barriers in reducing pollution from their activities. Therefore, ADB approved funding in 2016 for a dedicated financing platform with a strong focus on SMEs.

7. The BTH region still needs substantial support to meet the air quality objectives, which will require more than \$30 billion of new investment in the near term. Large pollution point sources (such as power plants, or iron and steel plants) have already installed end-of-pipe pollution control systems, so additional emission reductions must come from fuel switching (fossil fuel to renewable energy), process efficiency improvements, wholesale reengineering of industrial enterprises, cleaner transport infrastructure, and expanded use of agricultural waste. Therefore, the next stage of air quality improvements will need to come from deployment of more advanced, cleaner production technologies in the energy, transport, urban, and agriculture sectors, consistent with the broader transformation to a low-emissions economy.

D. Summary and Recommendations

8. The proposed project is an integral part of ADB's multiyear support for the BTH air quality improvement program. It builds on the policy actions initiated in ADB and KfW's policy-based loan (approved in 2015), and expands on the ADB and World Bank investment operations for the BTH region (approved in 2016). It will expand financing for the scale-up of replicable investments in low-emission development. The proposed project will make a direct contribution to improving air quality, inclusive and environmentally sustainable growth, private sector development, and climate change mitigation in the BTH region.

cost of conserved energy is above \$350 per ton of oil equivalent. International Energy Agency. 2015. *World Energy Outlook 2015*. Paris.

⁷ SMEs produce about 60% of the PRC's gross domestic product and contribute 80% to employment. The share of SMEs' participation in the PRC's exports (direct and indirect) is 68%. SMEs are also responsible for more than 60% of industrial pollution.