PROGRAM-FOR-RESULTS INFORMATION DOCUMENT (PID)
CONCEPT STAGE

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Program Name	CHINA ENERGY EFFICIENCY AND GREEN ENERGY FINANCING PROGRAM
Region	*East Asia and Pacific*
Country	*China*
Sector	*Energy and Extractives*
Lending Instrument	*Program for results*
Program ID	*P154669*
{If Add. Fin.} **Parent Program ID**	
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Implementing Agency	*Huaxia Bank and China Development Bank*
Date PID Prepared	*April 21, 2015*
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Concept Review Decision	Following the review of the concept, the decision was taken to proceed with the preparation of the operation.
Other Decision *{Optional}*	*Teams can add more if they wish or delete this row if no other decisions are added*

I. Introduction and Context

China has experienced the fastest economic growth in the world for the last three decades, with an economy that increased 18-fold and an urban population that more than doubled reaching 45 percent of the population. However, this remarkable growth and rapid urbanization have paid heavy environmental price. China has many of the world's most polluted cities, and is the largest emitter of greenhouse gases (GHGs) in the world. In particular, the Beijing-Tianjin-Hebei and its neighboring region (hereinafter referred to as Jing-Jin-Ji region) is experiencing severe air pollution, with an annual average $PM_{2.5}$ concentration of 96 $\mu g/m^3$ in 2014, far exceeding the national $PM_{2.5}$ standard of 35 $\mu g/m^3$ and WHO $PM_{2.5}$ standard of 10 $\mu g/m^3$, and some of the heavily polluted cities with polluting days for more than half of the year. The $PM_{2.5}$, SO_2, and NOx emissions have way exceeded the environmental absorptive capacity.

Concerned with the adverse health and environmental consequences from the severe air pollution, the Government of China (GoC) has put the "war against air pollution" as a top priority, and has been implementing a series of actions with significant amount of government budget to reduce air pollution. The most noteworthy is the Air Pollution Prevention and Control

Action Plan issued by the State Council, which mandates the Jing-Jin-Ji region to reduce their annual average $PM_{2.5}$ concentration by 25 percent from 2012 to 2017. Trans-boundary air pollution plays an important role. For example, approximately one quarter of the $PM_{2.5}$ concentration in Beijing comes from emission sources in the neighboring region. Therefore, integrated and coordinated actions to reduce air pollution in the Jing-Jin-Ji region is an important priority for the government. The Jing-Jin-Ji region also issued its detailed regulations for the Implementation of the Air Pollution Prevention and Control Action Plan in the Beijing-Tianjin-Hebei Region and Surrounding Areas (including Shandong, Shanxi, and Inner Mongolia provinces).

Coal is the single largest source for air pollutants and greenhouse gas emissions in China. China heavily relies on coal to meet its energy demand, with "king" coal dominating 66 percent in the energy mix. China consumed approximately 4 billion tons of coal in 2014, more than the rest of the world combined. In particular, half of China's coal is used for decentralized boilers in the industrial and residential sector, which is difficult and costly to control air pollutants emissions from the end-of-pipe solutions. This is in contrast to the bulk of coal used for power generation in most developed countries. Furthermore, coal quality in China is low, with high ash and sulfur content, and only around half of the coal is washed in China. Specifically in the Jing-Jin-Ji region, Hebei and Tianjin rely on coal for more than 90 and 60 percent of its energy respectively. Based on the estimates from the Chinese Academy of Environmental Planning under the Ministry of Environmental Protection and Tsinghua University, coal contributes to 94 percent, 70 percent, and 70 percent of SO_2, NOx, and CO_2 emissions respectively, as well as 63 percent of primary $PM_{2.5}$ and 56 percent of secondary $PM_{2.5}$ emissions in China.

Energy efficiency and green energy make the single largest contribution to carbon emission reduction and air quality improvement. Tapping the remaining energy efficiency (EE) potential in China requires economic structure changes as well as technical renovation and improvements, while scaling up green energy penetration involves switching from coal to natural gas and renewable energy (RE). To improve air quality, reducing coal consumption through improvement in EE and expanding the use of green energy is an essential solution, together with the end-of-pipe measures of particulates removal, desulfurization and denitrification. Together, they can lower the overall air quality control cost by 50 percent, compared to using only the end-of-pipe measures, according to the study conducted by International Institute for Applied Systems Analysis. Furthermore, EE and RE also make the single largest contribution to reduce greenhouse gas emissions, with EE measures contributing more than 80 percent to achieving China's carbon intensity reduction target while non-fossil fuels make up the rest, based on the study undertaken by China Energy Research Institute.

Energy efficiency and green energy are "win-win" options to mitigate both air pollution and climate change simultaneously. Facing both air pollution and climate change challenges, China needs to adopt a strategy to build new infrastructure that addresses both challenges at the same time. If focusing only on air pollution without tackling GHG emissions now, the new carbon-intensive infrastructure built today would lock the country into a high-carbon growth path for decades to come.

Chinese government is undertaking an aggressive energy efficiency and green energy campaign and set coal reduction targets for the Jing-Jin-Ji region. To mitigate the

environmental impacts, the GoC has undertaken one of the most aggressive energy efficiency and green energy campaigns in the world. President Xi recently called for an "energy revolution"—energy consumption, energy supply, institutional, and technology revolutions and international cooperation. The government set mandatory energy intensity (energy consumption per unit of GDP) reduction targets at 20 percent for the 11th Five-Year Plan (FYP, 2006-2010) and 16 percent for the 12th FYP (2011-2015). The GoC plans to adopt a total energy consumption cap and a coal consumption cap, in addition to the energy intensity reduction target, in the upcoming 13th FYP (2016-2020). China has currently the world's largest installed RE capacity, with 96 GW of wind and 28 GW of solar PV by 2014. Renewable energy accounts for 10 percent of total primary energy now, and is targeted to reach 15 percent (non-fossil fuel) by 2020, and 20 percent by 2030. Furthermore, the Chinese government is committed to reducing carbon intensity (carbon emissions per unit of GDP) by 40-45 percent from 2005 to 2020, and announced that its carbon emission would peak by 2030.

Specifically, the Air Pollution Prevention and Control Action Plan (hereinafter referred to as Action Plan) has set long-term goals and short-term targets, aiming at significantly improving air quality in ten years, and mandating the Jing-Jin-Ji region to reduce their $PM_{2.5}$ concentration by 25 percent from 2012 to 2017. The Implementation Regulations of the Air Pollution Prevention and Control Action Plan in the Jing-Jin-Ji and Surrounding Regions set mandatory target to reduce coal consumption by 83 million tons from 2012 to 2017. The National Development and Reform Commission (NDRC) issued detailed Implementation Regulations to supervise and enforce the achievement of these coal cap targets in the Jing-Jin-Ji region, and also set coal reduction targets in the top ten most polluted cities, almost all of which are in the Jing-Jin-Ji and neighboring region.

The Action Plan laid out ten key areas of air pollution prevention and control measures as the following:

1) Optimizing energy mix through (i) phasing out coal, with specific targets in the Jing-Jin-Ji region to reduce coal consumption by 83 million tons, of which 13 million tons in Beijing, 10 million tons in Tianjin, 40 million tons in Hebei, and 20 million tons in Shandong; (ii) expanding the use of alternative energy, particularly natural gas and renewable energy, with specific targets to increase natural gas consumption by 50 billion m^3 and the share of non-fossil fuels in primary energy to 15 percent in the Jing-Jin-Ji region by 2017; and (iii) improving energy efficiency in the industrial, power, and building sectors;
2) Reducing emissions from (i) point sources in the industrial and power sectors through implementing end-of-pipe measures of particulates removal, desulfurization, and denitrification; (ii) area sources to reduce dust emissions; and (iii) mobile sources in the transport sector through increasing public transport, improving fuel quality, phasing out inefficient vehicles, and promoting electric and compressed natural gas (CNG) vehicles;
3) Increasing the use of market mechanisms and expanding green financing to energy efficiency, green energy, and emission reduction investments through scaling up green financing from domestic banks and piloting innovative financing models and products;
4) Adjusting economic structure through phasing out and closing down inefficient energy-intensive industries;

5) Accelerating technology innovations;
6) Improving environmental standards and strengthening environmental permits for newly built infrastructure investments;
7) Strengthening legal framework and enforcement;
8) Establishing regional coordination and collaboration mechanisms, particularly in the Jing-Jin-Ji region;
9) Establishing environmental monitoring and warning systems; and
10) Specifying the responsibilities of the government, enterprises, and citizens.

The Action Plan is comprehensive, however, it paid less attention to energy efficiency, despite its cost effectiveness as an abatement measure to reduce both local and global emissions. Energy efficiency is the largest and lowest-cost source of emission reductions and is fully justified by development benefits and future energy savings. One of the value added of this proposed operation is to complement the government program with an emphasis on EE measures.

In addition, the Action Plan specified implementation responsibilities of the government and enterprises, where the government is primarily in charge of setting clear targets, issuing supportive policies, and strengthening monitoring and enforcement; while the enterprises have the main responsibilities in reducing emissions and investing in clean production and pollution abatement measures. Therefore, the lion share of the investments needed to deliver the results of the Action Plan would come from commercial financing for enterprises. Therefore, this proposed operation intends to focus on investments in energy efficiency and green energy (area 1 in the Action Plan outlined above), to a less degree end-of-pipe measures and clean fuels in the transport sector (area 2 in the Action Plan), through commercial financing channel (area 3 in the Action Plan), to support the Air Pollution Prevention and Control Action Plan and the 13th FYP for energy efficiency and green energy. This approach also supports the green finance agenda laid out by the People's Bank of China.

To achieve government's energy and environment targets requires substantial amount of green energy financing, and many enterprises face difficulties in access to financing. For energy efficiency and emission reduction alone, the Asian Development Bank estimated a total investment requirement of 2.4 trillion RMB for the 12th FYP period to achieve the 12th FYP energy intensity reduction targets. Many EE developers face substantial financing barriers: (a) most energy inefficient end users and EE project developers such as energy service companies (ESCOs) face difficulties in access to financing, because of their inherent low creditworthiness resulting from a weak balance sheet and limited collateral. Most local banks usually rely on balance sheet financing, which requires that borrowers either have good credit ratings or high levels of collateral, which, in turn, favors large-scale borrowers. The concept of project-based financing that focuses on the cash flows from energy savings has not yet been widely accepted by financial institutions. The end result is that the most creditworthy potential clients do not necessarily need financing for EE, while the customers most in need of financing are typically not creditworthy; (b) EE investments also involve perceived performance risk because lenders are not sure whether the expected future savings will be realized or captured by the investors; (c) most financial institutions still lack the required technical expertise and interests in EE investments, and view EE lending as risky with a strong social cause; and (d) EE investments tend to be small, with high transaction costs. Furthermore, RE developers also faces financing

barriers: (a) mismatch between short-term tenure and long-term payback, since RE technologies are capital intensive with long-term paybacks; (b) emerging RE technologies (for example, offshore wind and concentrated solar power) face technology risks; and (c) credit risks for small and medium enterprises (SME) developers, particularly for distributed generation.

Public funds are essential to incentivize investors and unlock project financing by lowering risks and closing finance gaps. For EE, public funds are needed to mitigate financiers' risk perception, to aggregate small deals, and to enhance the interest and capacity of domestic banks. For RE, public funds are needed to provide long-term tenure to match the long-term payback period, mitigate new technology risks, and increase access to financing for SMEs particularly for distributed generation. Finally, experience from many publicly funded clean energy financing mechanisms demonstrated that capacity building and technical assistance to the participating banks are critical with high payoff.

The World Bank Group has long-term engagement in China's energy efficiency and renewable energy sectors over the past 20 years. The World Bank's long-term engagements with the government, moving from pilots to mainstreaming actions, have resulted in transformational impacts. Over the past two decades, the World Bank has been working with China to help China move to more market-based approaches for energy conservation under the three phases of World Bank/GEF-supported projects: (a) the Energy Conservation Project introduced the ESCO concept to China by establishing the first three ESCOs; (b) the Energy Conservation II Project provided partial risk guarantees to help ESCOs access to financing and established an ESCO Association, as the ESCO industry started to grow; and (c) the China Energy Efficiency Financing (CHEEF) program is now supporting the mainstreaming of energy efficiency lending in the Chinese banking sector through EE credit lines. As a result, the ESCO industry in China has grown to nearly 5,000 companies with nearly $10 billion in energy performance contracts in 2012.

Furthermore, the International Finance Corporation (IFC) has also been implementing the China Utility-Based Energy Efficiency Project (CHUEE) that intends to promote EE improvements with commercial bank financing backed by a partial risk guarantee facility. The CHUEE program has been working with 7 participating banks, with first loss provided by a combination of GEF, MOF/CDM Fund and Provincial MOF in one case to date. The program has supported a total 217 EE/RE loans, with a volume of US $ 884 million, mobilizing $2.2 billion in EE/RE project investment. The total annual GHG remission reduction is about 20 million tons.

Similarly, the World Bank and GEF also have a strategic long-term partnership with the GoC on renewable energy through the China Renewable Energy Scale up Program (CRESP) program. The First Phase of the CRESP has made significant contributions to the scale-up of RE in China, which is transformed from a global marginal player to the world leader. The ongoing Second Phase of CRESP intends to move RE development in China from quantitative scale-up under Phase I to sustained growth under Phase II, with a focus on efficiency improvement, cost reduction, and smooth grid integration. The success of these long-term sector engagements is largely thanks to the interventions at the right timing, strong government commitment and support, and continuity of the teams both on the government side and the Bank side.

The ongoing dedicated credit lines through local banks have demonstrated their success and effectiveness in scaling up green energy financing. The ongoing China Energy Efficiency Financing Program through Huaxia Bank and EXIM Bank has already financed more than $1 billion EE investments in China, of which $200 million from IBRD and the remaining funding from the participating banks and industrial enterprises. These investments resulted in an annual energy savings of 2.3 million tons of coal equivalent and CO_2 emission reduction of 5.6 million tons per year. The CHEEF program has significantly increased participating banks' capacity, interest, and confidence in mainstreaming EE and RE investments. To date, engaging domestic banks seems to have had the greatest success in unlocking commercial financing with high leverage in China and other countries.

However, result-based approach is needed now to help the government achieve its result-oriented energy and environment targets. The ongoing EE credit lines are input-based. But the government's Air Pollution Prevention and Control Action Plan, energy efficiency and green energy program, and carbon emission reduction program all have mandatory result-based targets. Therefore, a new targeted, result-based operation is needed to support the government's output-based targets in reduction of coal consumption and emissions, particularly in the Jing-Jin-Ji region.

The proposed operation is fully consistent with the Country Partnership Strategy (CPS) FY2013–2016 for China, "supporting greener growth, in particular, shifting to a sustainable energy path". The Operation also contributes to China's efforts to improve energy efficiency, expand use of renewable energy, and address air pollution and climate change during the 13th FYP. In addition, the proposed operation would support the World Bank Group's corporate commitment to increasing energy efficiency and renewable energy lending, and addressing climate change. The project is also aligned with the WBG's goal of promoting shared prosperity.

II. Program Development Objective(s)

The program development objective is to improve energy efficiency and expand green energy, with a focus in the Jing-Jin-Ji and neighboring regions, contributing to the government's targets to reduce air pollutants and carbon emissions.

The proposed Program is expected to contribute to four key result areas to support achieving the goals set in the Air Pollution Prevention and Control Action Plan. These results areas have been identified based on a preliminary assessment of where the World Bank's results based support can leverage the participating banks' own investments. The key results areas are the following, with a preliminary list of indicators to be further developed and refined during preparation.

- **Result Area 1: Improving energy efficiency**. Key intermediate indicator would be cumulative amount of EE investments supported (million $), output indicator would be energy savings achieved (tons of coal equivalent), and outcome indicators would be $PM_{2.5}$, SO_2, NOx, and CO_2 emissions reduced (tons).

- **Result Area 2: Expanding renewable energy**. Key intermediate indicator would be

cumulative amount of RE investments supported (million $), output indicators would be renewable energy power installed capacity (GW) and electricity generated (GWh), and outcome indicators would be $PM_{2.5}$, SO_2, NOx, and CO_2 emissions reduced (tons).

- **Result Area 3: Abating air pollutants emissions**. Key outcome indicators would be $PM_{2.5}$, SO_2, and NOx emissions reduced (tons).

- **Result Area 4: Strengthening institutional capacity of the participating banks**. Experience from the energy efficiency and green energy programs engaging domestic banks in China and around the world demonstrated that the most important factor for program success and sustainability is participating banks' internal structure conducive to green financing, particularly strong management commitment, dedicated teams, and an institutional and incentive structure that can mobilize staff in all the relevant departments and branches. In addition, innovative financing models and products tailored to the special market needs of energy efficiency and green energy, such as project-based financing, are also critical to increase access to financing for energy efficiency and green energy investments. Therefore, key output indicators would be: (a) green credit department or bank-wide green credit leading group established in the participating banks; (b) innovative financing models and products tailored to EE and RE distributed generation investments piloted; and (c) increased lending to the under-served market segments such as SMEs and ESCOs. The outcome would be institutional capacity improved and green financing mainstreamed at the participating banks.

III. Program Description

Program Description. ***The Bank-supported Program***: The proposed Bank-supported Program will support the Air Pollution Prevention and Control Action Plan and the 13th FYP for energy efficiency and green energy, with a focus on energy efficiency and green energy investments, thereby, contributing to the government's coal reduction cap and emission reduction targets.

Specifically, the proposed Program will focus on four investment areas in Jing-Jin-Ji and neighboring regions (including Shandong, Shanxi, and Inner Mongolia provinces):

a) *Improving energy efficiency*. Potential investment areas include: (i) replacing inefficient energy-intensive industrial equipment with highly efficient ones, such as coal-fired boilers (consuming half of coal consumption), motors (consuming half of electricity consumption), pumps, heat exchange systems; (ii) replacing inefficient industrial processes and technologies with highly efficient ones particularly in energy intensive sectors (iron and steel, chemical, building material and metallurgy—about half of industrial energy consumption), such as more efficient industrial kilns and chemical production technologies; (iii) recovery and utilization of by-product gas, waste heat and pressure for electricity generation or co-generation of power and heat; (iv) co-generation for power and heat; and (v) green building EE measures, including lighting, HVAC (heating, ventilation, and air conditioning,); and building envelope (insulation for roof, walls, windows, doors). These investments are expected to reduce coal consumption, and eligibility criteria for the sub-

projects will be further defined during preparation;

b) *Expanding renewable energy:* particularly distributed generation renewable energy. Potential investment areas include: (i) solar PV; (ii) solar water heaters; (iii) wind; (iv) biomass; and (v) geothermal heat pumps.

c) *Abating air pollutants emissions*: The Program will also invest in a small share of the funding to air pollution abatement measures that will lead to significant reduction in local air pollutants emissions but modest or no reductions in GHGs, including but not limited to: (i) replacing coal with natural gas; (ii) replacing diesel and gasoline vehicles with electric and compressed natural gas (CNG) vehicles; and (iii) installing end-of-pipe equipment such as particulates removal, desulfurization, and denitrification. The government recently approved a premium tariff for end-of-pipe measures in the power plants, specifically 0.2 fen/kWh for particulates removal, 1.5 fen/kWh for desulfurization and 0.8 fen/kWh for denitrification to make these investments installed in the power plants commercially viable.

d) *Strengthening institutional capacity of the implementing agencies*. The participating banks will (i) establish green credit department or bank-wide green credit leading group as dedicated teams and internal institutional structure to mobilize staff in all the relevant departments and branches; (ii) set up internal green credit procedures for deal origination, risk assessment, and approval, and provide incentives to staff to undertake green financing investments; (iii) provide training to staff on EE and green energy financing, particularly those responsible for deal origination and risk assessment; (iv) undertake aggressive marketing and business development for deal origination; (v) develop and pilot innovative financing models and products tailored to EE and RE distributed generation investments, and market aggregation models for small and medium-scale enterprises and projects; and (vi) strengthen capacity on measurement and verification of operation results. The GEF support under the ongoing CHEEF and CRESP programs can provide technical assistance and capacity building to the participating banks. This will contribute to the requirements for expanding green financing in the Air Pollution Prevention and Control Action Plan, and support the Energy Efficiency Credit Guideline recently issued by the China Banking Regulatory Commission (CBRC) and NDRC, as well as the green finance agenda laid out by PBOC.

Program Size and Boundary: The proposed PforR Program is defined as investments in EE, green energy, and pollution abatement, leading to reduction in coal and emissions. The expenditure of the PforR Program would be at least $2 billion, with $1 billion for each participating bank, of which $500 million IBRD and $1.5 billion investments from the two participating banks.

Institutional Arrangement for Implementation: The government designated Huaxia Bank and China Development Bank (CDB) as the implementing agencies for this proposed operation. This implementation modality is chosen because (a) given the fragmented and decentralized nature of many retail small-scale EE and green energy investments, it is cost-effective for the government and MDBs to adopt a wholesale approach that engages the domestic banks who are responsible for managing the EE and green energy investment portfolio to achieve the maximum leverage of

public funds and ensure sustainability; and (b) this proposed operation builds on the successful experience of the ongoing CHEEF Program, but with a result-based focus.

The participating banks will be responsible for identifying, appraising, and financing eligible investments that meet the criteria in the Operational Manual, measuring and verifying results, and bearing the full default risks. The detailed eligibility criteria and appraisal guidelines will be outlined in the Operational Manual (OM). The government is responsible for laying out priority investment areas consistent with the government's Action Plan and green energy and emission reduction programs and targets, and assisting the participating banks in identifying potential deals.

Both Huaxia Bank and CDB are leaders in green financing in China, with a proven track record and experience in EE and green energy financing. Huaxia Bank has demonstrated its interests, capacity and expertise in EE and green energy financing under the ongoing IBRD/GEF CHEEF program and AFD-funded EE and RE financing project. Huaxia Bank is fully committed to green financing from the top management; has established a dedicated team at the HQ and branches, internal system and procedures for green energy financing; and developed innovative financing products. The top management of Huaxia Bank considers air pollution control in the Jing-Jin-Ji region as a top priority, and plans to set up a 5 billion RMB Blue Sky and Clear Water Fund, with a focus in the Jing-Jin-Ji and neighboring regions.

CDB is fully owned by the government, and has been actively supporting the government's green agenda. CDB finances approximately 1 trillion RMB investments in energy efficiency and renewable energy each year in China, accounting for more than 10 percent of their entire portfolio. They are the largest financier for RE in China, leading more than half of the solar PV investments in China, and has dedicated departments financing RE and EE. CDB was an implementing agency under the Bank-financed Micro and Small Enterprise (MSE) Finance Project.

The Results. The table below outlines the results chain for the Program in each result area. In addition, Bank disbursements will be made against achievement of a pre-agreed set of Disbursement-Linked Indicators (DLIs). The choice of DLIs will be based on four factors: (a) the importance of the indicator that signals a critical action/output along the results chain; (b) perceived need to introduce a strong financial incentive to deliver the result; (c) practical aspects of verifying achievement; and (d) capacity of the participating banks to achieve the DLI during the implementation period of the Program. The IBRD loan funds will be disbursed directly to the participating banks. The results and DLIs are established at each participating bank level, and the Bank's IBRD funds disbursement will be based on the achievement of results of one participating bank and not linked to the results of the other. The table below also shows indicative DLIs which will be further developed and refined during preparation.

Result Area	Actions	Outputs/ Intermediate results	Outcomes	Indicative DLIs (to be refined)

Result Area 1: Improving energy efficiency	Scaling up EE investments	Cumulative amount of EE investments supported (million $), and energy savings achieved (tons of coal equivalent)	$PM_{2.5}$, SO_2, NOx, and CO_2 emissions reduced (tons)	EE investments approved by the participating banks (million $) in the initial years of program implementation; and energy savings realized (tons of coal equivalent) in the later years of program implementation
Result Area 2: Expanding renewable energy	Scaling up RE investments	Cumulative amount of RE investments supported (million $), and renewable energy power installed capacity (GW) and electricity generated (GWh)	$PM_{2.5}$, SO_2, NOx, and CO_2 emissions reduced (tons)	RE investments approved by the participating banks (million $) in the initial years of program implementation; and renewable energy power installed capacity (GW) and electricity generated (GWh) in the later years of program implementation
Result Area 3: Abating air pollutants emissions	Investing in such measures as replacing coal with natural gas, replacing gasoline vehicles with electric and CNG vehicles, installing end-of-pipe equipment such as particulates removal, desulfurization, and denitrification		$PM_{2.5}$, SO_2, and NOx emissions reduced (tons)	$PM_{2.5}$ and SO_2 emissions reduced (tons) when the sub-loans approved by the participating banks
Result Area 4: institutional capacity of the participating banks	(a) establish green credit department or bank-wide green credit leading group; (b) set up internal green credit procedures, and provide incentives to staff; (c) provide training to staff; (d) undertake aggressive marketing and business development for deal origination; (e) develop and pilot innovative financing	(a) green credit department or bank-wide green credit leading group established in the participating banks; (b) innovative financing models and products tailored to EE and RE distributed generation investments piloted; and (c) increased lending to SMEs and ESCOs.	Institutional capacity improved and green financing mainstreamed at the participating banks	(a) green credit department or bank-wide green credit leading group established in the participating banks; (b) innovative financing models and products tailored to EE and RE distributed generation investments piloted; and (c) increased lending to SMEs and ESCOs.

	models and products; and (f) strengthen capacity in M&V of results.			

The DLI of energy savings realized under Result Area 1 could be verified on a sample basis by accredited third-party verifiers after the efficient equipment is installed and actual energy savings are materialized. The participating banks are undertaking a study on practical and operational measurement and verification (M&V) methodology, protocol, and procedures of the DLIs, building on existing M&V methodologies, protocol, and practices in China. The Program will select independent third-party verifiers from the 26 third-party EE M&V verifiers accredited by MOF and NDRC. In addition, the Bank is preparing a parallel GEF project of $17.8 million on Developing Market-Based Energy Efficiency Program in China, with a focus on improving energy savings MRV system in China, which can help M&V of the energy savings DLI. Similarly, the DLI of renewable energy electricity generation under Result Area 2 could be verified on a sample basis by independent third-party verifiers with electric meters after the renewable energy equipment is installed and starts to generate electricity. Finally, the DLI of emission reduction under Result Area 3 would be calculated from standard proven methodology when the participating banks approve the sub-loans.

IV. Initial Environmental and Social Screening

An environmental and social initial screening was carried out by the Bank task team to identify potential risks as well as opportunities that may be associated with the Program, based on the information available and the ongoing Bank-financed similar projects and operations. The proposed Program is likely to have positive social and environmental impacts, thanks to the benefits such as improved energy efficiency and emission reductions of pollutants, and health improvement through air pollution control and management. Through screening, it was confirmed that there is no category A-type activities in the Program, based on the past and ongoing Bank-supported projects, which have had only Category B and C investments. An environmental and social systems assessment (ESSA) will be conducted to identify the adequacy of the environment and social systems during preparation. The Program will build upon the experiences from existing national and local policies and regulations, as well as other relevant measures, e.g., Operations Manual prepared and used by the ongoing projects, to ensure use of environmentally friendly technology, green growth and social inclusion, participation, transparency and adequate environmental and social management system in place.

V. Tentative financing

Source:	($m)
Borrower/Recipient:	1,500
IBRD	500
IDA	
Others (specify)	
Total	2,000

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