



# REQUEST FOR CEO APPROVAL

PROJECT TYPE: Medium-sized Project

TYPE OF TRUST FUND: GEF Trust Fund

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## PART I: PROJECT INFORMATION

Project Title: Global Energy Efficiency Financing Framework (GE2F2) – design of strategies and deployment mechanisms			
Country(ies):	Global (with focus on China, India and Brazil)	GEF Project ID: <sup>1</sup>	5833
GEF Agency(ies):	EBRD (select) (select)	GEF Agency Project ID:	
Other Executing Partner(s):		Submission Date:	2015-11-14 2016-04-15
GEF Focal Area (s):	Climate Change	Project Duration(Months)	36
Name of Parent Program (if applicable):		Project Agency Fee (\$):	180,500
➤ For SFM/REDD+ <input type="checkbox"/> ➤ For SGP <input type="checkbox"/> ➤ For PPP <input type="checkbox"/>			

### A. FOCAL AREA STRATEGY FRAMEWORK<sup>2</sup>

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount (\$)	Cofinancing (\$)
CCM-2 (select)	Outcome 2.2: Sustainable financing and delivery mechanisms established and operational	Output 2.2: Investment mobilized	GEF TF	1,900,000	32,150,000
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
Total project costs				1,900,000	32,150,000

### B. PROJECT FRAMEWORK

<b>Project Objective: To develop and showcase energy efficiency financing strategies, internal structures and deployment mechanisms to scale up energy efficiency financing within the Global Energy Efficiency Financing Framework (GE2F2) partner banks in China, India and Brazil.</b>						
Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount (\$)	Confirmed Cofinancing (\$)
Design and showcase of strategies and mechanisms to finance energy efficiency by GE2F2 partner banks	TA	Capacity of GE2F2 partner banks to scale up financing for energy efficiency developed	Output 1 – Supplemental market studies and engagement workshops for China, India and Brazil completed	GEF TF	1,900,000	32,000,000

<sup>1</sup> Project ID number will be assigned by GEFSEC.

<sup>2</sup> Refer to the [Focal Area Results Framework and LDCF/SCCF Framework](#) when completing Table A.

			Output 2 – Banking strategy and action planning developed			
			Output 3 – Targeted technical assistance deployed for capacity building and banking product development with GE2F2 partner banks			
			Output 4 – GE2F2 knowledge exchange and dissemination established			
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
Subtotal					1,900,000	32,000,000
Project management Cost (PMC) <sup>3</sup>				(select)	0	150,000
<b>Total project costs</b>					1,900,000	32,150,000

### C. SOURCES OF CONFIRMED COFINANCING FOR THE PROJECT BY SOURCE AND BY NAME (\$)

Please include letters confirming cofinancing for the project with this form

Sources of Co-financing	Name of Co-financier (source)	Type of Cofinancing	Cofinancing Amount (\$)
GEF Agency	EBRD	Cash	2,000,000
GEF Agency	EBRD	In-kind	150,000
GEF Agency	EBRD	Investment	30,000,000
(select)		(select)	
(select)		(select)	
(select)		(select)	
(select)		(select)	
(select)		(select)	
(select)		(select)	
<b>Total Co-financing</b>			32,150,000

### D. TRUST FUND RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY<sup>1</sup>

<sup>3</sup> PMC should be charged proportionately to focal areas based on focal area project grant amount in Table D below.

GEF Agency	Type of Trust Fund	Focal Area	Country Name/ Global	(in \$)		
				Grant Amount (a)	Agency Fee (b) <sup>2</sup>	Total c=a+b
EBRD	GEF TF	Climate Change	Global	1,900,000	180,500	2,080,500
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
<b>Total Grant Resources</b>				1,900,000	180,500	2,080,500

<sup>1</sup> In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this table. PMC amount from Table B should be included proportionately to the focal area amount in this table.

<sup>2</sup> Indicate fees related to this project.

**F. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:**

Component	Grant Amount (\$)	Cofinancing (\$)	Project Total (\$)
International Consultants	1,900,000	2,000,000	3,900,000
National/Local Consultants			0

**G. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT?** No

(If non-grant instruments are used, provide in Annex D an indicative calendar of expected reflows to your Agency and to the GEF/LDCF/SCCF/NPIF Trust Fund).

## PART II: PROJECT JUSTIFICATION

### **A. DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN OF THE ORIGINAL PIF<sup>4</sup>**

#### *Summary of project strategy and alignment with the original PIF*

1. The Project's design has been shaped and validated by several key findings from research and stakeholder consultations undertaken in China, Brazil and India during the past year:
  - a) **Base the GE2F2's strategies and internal structures on the EBRD's Sustainable Energy Financing Facility (SEFF) experience.** Based on performance evidence, SEFFs are one of the most successful models for considerably enhancing commercial energy efficiency financing. The EBRD's model of consistent screening for opportunities among already existing clients is efficient, effective and easy to streamline among interested banks. The EBRD is willing to share its experiences of mainstreaming energy efficiency with the global financing community, and local financial institutions in China, India and Brazil have expressed significant interest in scaling up energy efficiency financing using the EBRD SEI experience and SEFF model.
  - b) **Engaging with commercial banks that are the most pro-active regarding energy efficiency financing is the most effective way to rapidly and efficiently transfer energy efficiency financing knowledge** to the commercial financial sector and thereby generate examples of best practices on the ground and case studies for wider dissemination. Partner banks for GE2F2 are those who signal interest to mainstream energy efficiency financing, yet lack the full capacity to do so. In other words, these banks do not require additional finance but rather require assistance in enhancing their capacity to originate and appraise energy efficiency project.
  - c) **During the Project, neither the EBRD nor the GE2F2 Project nor the GEF should provide any credit lines.** All project assistance should be purely technical. The GE2F2's focus on efficiently developing the capacity of partner banks, and then disseminating learning and tested tools, is consistent with both the goal of leveraging private sector resources and the limited MSP resources.
  - d) **Effective knowledge exchange and dissemination requires partnership with a global organization.** The Project's knowledge management and awareness activities will be implemented through a specialist consultancy or a consortium of consultants who will be recruited through a dedicated process. The experience and expertise of such consultants should include capacity building and the sharing of best practices; engaging stakeholders, both public and private; and facilitating the networking of international organisations, banks and stakeholders through multilateral events and regional activities focused on energy efficiency financing.
2. Overall, the Project seeks to contribute to the acceleration of energy efficiency financing in large emerging economies by raising the profile of the proven EBRD model with commercial banks beyond the EBRD's "traditional" region of operations consisting of economies in transition. The approach is to:
  - Offer targeted energy efficiency corporate planning assistance to interested banks in China, India and Brazil, to demonstrate how banks can enhance their capacity to originate and appraise energy efficiency projects;
  - A specialist consultancy or organisation will partner to raise the awareness and understanding of this direct work, as well as EBRD's SEFF experience to date.
3. This change in the MSP approach from a top-down to a more bottom-up, direct, engagement of local banks differs from the initial assumption that the MSP would need to directly support energy efficiency projects by providing a dedicated financing platform either as a fund or as a programme reuniting financing and donor entities.

During the PPG-supported work it became evident that the significant bottleneck to wider scaling up of energy efficiency financing is the lack of origination capacity rather than the lack of funding. Some commercial banks are willing to move rapidly to develop energy efficiency business lines, however, capacity gaps in originating and appraising energy efficiency projects remain their main bottleneck. Importantly this finding reflects that a number of pertinent non-financial barriers in addition to financial barriers prevent the full realisation of energy efficiency potential in these countries.

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<sup>4</sup> For questions A.1 –A.7 in Part II, if there are no changes since PIF and if not specifically requested in the review sheet at PIF stage, then no need to respond, please enter "NA" after the respective question.

Therefore, rather than working towards ultimately establishing a finance facility, the Project will help design, pilot and showcase experiences of deploying the EBRD SEI experience and SEFF model, in order to help establish durable internal structures to mainstream and scale up energy efficiency financing throughout the operations of interested banks. Such strategies and tools will then be made available to other banks globally, to apply them in a range of contexts, as part of a Global Energy Efficiency Financing Framework. This experience may later form the basis for a future full-project proposal to follow-up to the GE2F2.

4. Regarding co-financing, the EBRD has proposed an addition US\$ 30 million for the GE2F2 Project that is investment related to the EBRD's recently established SEFF in Egypt. This financing stream, which is part of the intended wider diffusion of the energy efficiency financing model throughout the emerging world, is commercial funding which has been made available to the country's banking system, given that Egypt has recently become part of EBRD's expanded region of operations. The signed co-financing letter has been updated accordingly. Egypt's economic trends are in many ways more similar to some of the large emerging economies which are the main focus of knowledge sharing via the GEF MSP grant, rather than EBRD's "traditional" transition economies.
5. The overall project objective and expected outcome remain aligned with the original PIF. Changes by output are outlined in the table below. The expected outputs have been reworded to increase clarity and have been significantly elaborated in this RCA. Of note is an additional critical output (Output 4) that focuses on stakeholder coordination and knowledge exchange.
6. The Project will disseminate the energy efficiency financing model in China, India and Brazil, and then showcase this experience via an appropriate knowledge-sharing partner consisting of a specialist consultancy or a consortium of consultants.

**TABLE 1. CHANGES IN ALIGNMENT OF OUTPUTS WITH THE ORIGINAL PIF**

Original Output	Changes in alignment with the PIF
1 - Market studies for China, India and Brazil completed	<p>The nature and purpose of the reports has been reconsidered in light of the limited MSP resources, the wider availability of information about the three countries, and the change in the MSP approach from a top-down to a bottom-up, direct, engagement of local banks.</p> <p>In light of this, market reviews will only be drawn upon where additional market insight is necessary to serve as guidance for the project team, to understand the local context during direct initial engagement with the banking community.</p> <p>The comprehensive nature previously proposed for such reports reflected the initially envisaged top-down approach for the MSP and the financing platform that would have followed it. With direct engagement of banks now proposed as more effective, detailed reports are no longer necessary but will serve for guidance only if necessary.</p> <p>Such reports will review in brief the financial sector of the country, relevant energy efficiency policies or programmes and barriers to energy efficiency financing development.</p> <p>For clarity, this Output has been renamed "Supplemental market studies for China, India and Brazil completed."</p>
2 - GE2F2 strategy and deployment plans developed	<p>This set of outputs is suggested to remain functionally similar to the PIF. However, given the proposal to engage directly with interested banks on the ground from the onset, rather than to follow a top-down approach, the interested banks will develop their own energy efficiency financing mainstreaming strategies with EBRD assistance.</p> <p>So far, upon the engagement of banks during the PPG-funded Project development phase, some interested banks have been provided with EBRD templates of energy efficiency financing action plans to mainstream energy efficiency. It is proposed that with full project resources, the EBRD will be able to assist banks in further defining such action plans and identifying deployment capacity gaps.</p> <p>The general role and outcome of such action plans is to widely define the energy efficiency financing activities and products to develop, the type of projects and the geographical coverage to be targeted, and the resources to be committed to this effort (and in doing so identify internal capacity gaps to deployment).</p> <p>This approach of developing bank-level strategies ensures direct applicability of the strategy to the actual working circumstances of each bank and ownership of the strategy. This better reflects the EBRD SEFF approach where each SEFF partners with financial institutions, enabling them to develop, in a durable manner, the internal structures necessary to mainstream and to scale up energy efficiency financing. However, given the very limited MSP resources available, the SEFF approach cannot be replicated on the</p>

Original Output	Changes in alignment with the PIF
	<p>whole, but rather the EBRD will offer corporate-level advice and share expertise with the interested GE2F2 partner banks carrying out the bulk of the definition and piloting work.</p> <p>For clarity, this Output has been renamed “Banking strategy and action planning developed.”</p>
3 - Banking products developed	<p>Component 3 remains relatively similar to the PIF with changes reflecting further GE2F2 strategy development and discussions with potential pilot banks during the PPG phase.</p> <p>The PIF did not extensively detail the process of transposition of the EBRD SEI experience and SEFF model to PFI’s or banking product development. Therefore this component has been refined and additional sub components and activities have been added accordingly.</p> <p>Following the development of energy efficiency financing action plans under Output 2, the GE2F2 partner banks will identify available internal resources towards the further design and implementation of the strategies, and highlight the capacity gaps they find.</p> <p>Such gaps can be related to, for instance, lack of technical capacity to identify EE investment potential, or to track the finance and impact data related to energy efficiency projects. The EBRD would assess whether short-term experts can be assigned to work with the banks on such specific capacity gaps. It is envisaged that the experts will be called-off from a roster.</p> <p>Therefore, the envisaged approach to the provision of GE2F2 technical assistance to banks in the three countries has changed from three SEFF-like country implementation teams, to a framework of individual or corporate experts who will be called-off when GE2F2 partner banks agree with the EBRD to address specific implementation skills gaps related to their EE mainstreaming strategies /action plans.</p> <p>Such assignments will be managed by EBRD. Their overall objective will be that of complementing interested GE2F2 partner banks in developing their capacity to implement their energy efficiency financing action plans and develop durable energy efficiency financing structures and banking products. For clarity, this Output has been renamed “Targeted technical assistance deployed for energy efficiency financing capacity building with GE2F2 partner banks”.</p>
Knowledge management	<p>An Output for GE2F2 knowledge exchange and dissemination has been added to aggregate and showcase partner banks’ experiences, and share their business opportunities globally. Under this output activities will be closely linked with Outputs 1, 2 and 3 to ensure lessons learned sharing between projects and the establishment of best practice to energy efficiency finance mainstreaming and banking product development in China, India, Brazil and beyond.</p>

**A.1 National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NBSAPs, national communications, TNAs, NCSA, NIPs, PRSPs, NPFE, Biennial Update Reports, etc.**

***China***

7. The project is aligned with the plans and recommendations set out in China's national communications to the UNFCCC. The 2nd National Communication includes industrial energy efficiency among the key energy conservation projects during the 12th Five Year Plan (2010-2015). These include targets for reduction in carbon intensity by 17% and energy intensity by 16% to be achieved by 2015 compared to 2010. In June 2015, China submitted its ‘Intended Nationally Determined Contribution’ (INDC),<sup>5</sup> including the target to peak CO<sub>2</sub> emissions by 2030 at the latest, lower the carbon intensity of GDP by 60% to 65% below 2005 levels by 2030, and increase the share of non-fossil energy of total primary energy supply to around 20% by that time.
8. The key energy efficiency improvement programs under the 12th Five Year plan include promoting structural changes in the overall economy and in the industrial sector through (a) suppressing the growth in energy-intensive industrial sectors, (b) phasing out obsolete and inefficient production capacity, (c) upgrading the energy efficiency of the remaining industries through replacing inefficient equipment and industrial processes, (d) ensuring that the new industrial capacity uses efficient industrial technologies, (e) increasing the share of renewable energy and clean energy in the energy supply mix, and (f) accelerating the growth in the service sector and new industries with high

<sup>5</sup>See: <http://www4.unfccc.int/submissions/INDC/Published%20Documents/China/1/China's%20INDC%20-%20on%2030%20June%202015.pdf>

value-addition and low energy intensity. The 13<sup>th</sup> Five Year Plan (covering 2016-2020 and to be released in March 2016) will set separate targets for energy intensity and CO<sub>2</sub> emissions per unit GDP.

### **India**

9. The project is fully consistent with India's national communications to the UNFCCC as well as India's National Action Plan on Climate Change (NAPCC), which is a nation-wide framework for low carbon and a climate resilient future. The NAPCC outlines steps that will be taken to address both development and climate-related objectives in keeping with regional and global priorities in reducing fossil fuel consumption and GHG emissions. The NAPCC pledges to reduce India's GDP emissions intensity by 20–25% by 2020 compared to 2005 levels.
10. The project objectives are also fully aligned with the National Mission for Enhanced Energy Efficiency (NMEEE)<sup>6</sup> – one of the eight Missions under the NAPCC – that emphasizes on the need to develop and demonstrate energy efficient technologies in the sector. The target under the NAPCC is to achieve a 4% to 5% reduction of energy consumption of the participating facilities in 2015 (below 2010 levels).
11. The project is also aligned with India's 12th Five Year Plan (2012-2017) and provides the basic direction for government activities, addressing all sectors and policy areas.

### **Brazil**

12. The Government of Brazil is committed to addressing the challenges presented by climate change and was one of the first major developing countries to set an emissions reduction target. Brazil adopted the Brazil National Climate Change Plan in December 2008<sup>7</sup>, which defines actions and measures aimed at mitigation and adaptation to climate change, and enacted Federal Law No. 12,144 of 9 December 2009, which launched the Brazilian Climate Change Fund to financially support mitigation and adaptation action with resources from oil royalties. The law creates a supportive environment for Federal, State and Local Governments actions on Climate Change. In this context, the Government has established a national voluntary commitment of reducing Brazil's GHG emissions by 36.1% - 38.9% by 2020, compared to a business as usual (BAU) scenario, with emission reductions from energy efficiency contributing 12 to 15 million tonnes of CO<sub>2</sub>eq in 2020 to the country's targets. This target was solidified in a national law in December 2010.
13. Part of the National Climate Change Plan, implementation of the National Policy for Energy Efficiency<sup>8</sup> is expected to result in gradual energy savings of up to 106 TWh/year to be reached in 2030, avoiding emissions of approximately 30 million tons of CO<sub>2</sub> and aiming to improve energy efficiency in industry, transport and buildings.
14. Brazil's Second National Communication to the UNFCCC (2010) identifies industry as the second largest contributor to the country's carbon dioxide emissions from the energy sector (24% in 2005).<sup>9</sup> The Project supports the urgent efforts identified in the Second National Communication regarding the reduction of emissions from rapidly growing iron and steel, cement and chemicals sectors.

## **A.2. GEF focal area and/or fund(s) strategies, eligibility criteria and priorities.**

15. The Project supports the GEF-5 strategic objective CCM-2 'Promotion of market transformation for energy efficiency in industry and the building sector' under the climate change mitigation focal area, with the expected focal area outcome of 'sustainable financing and delivery mechanisms established and operational', by promoting the deployment and diffusion of energy efficient technologies and practices in industrial production and manufacturing processes, commercial and infrastructure projects.

## **A.3 The GEF Agency's comparative advantage:**

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<sup>6</sup> See: <http://www.archive.india.gov.in/allimpfrms/alldocs/15659.pdf>

<sup>7</sup> See: [http://www.mma.gov.br/estruturas/smcq\\_climaticas/\\_publicacao/141\\_publicacao07122009030757.pdf](http://www.mma.gov.br/estruturas/smcq_climaticas/_publicacao/141_publicacao07122009030757.pdf)

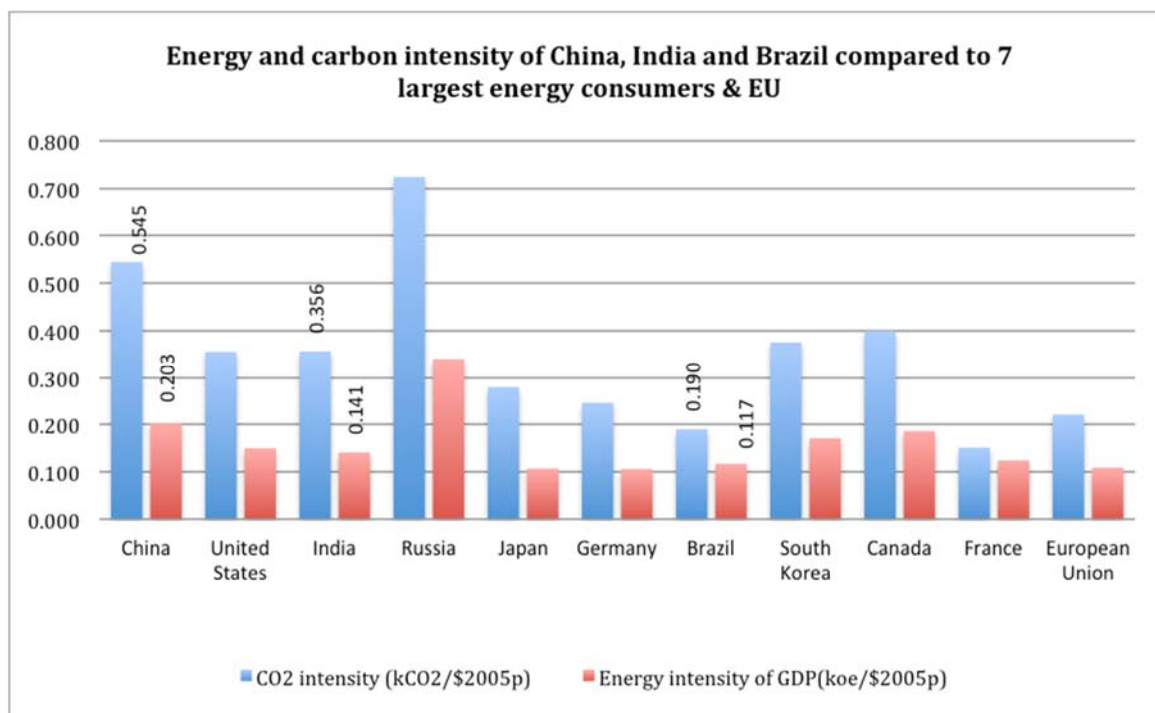
<sup>8</sup> See: [http://www.mma.gov.br/estruturas/imprensa/\\_arquivos/96\\_11122008040728.pdf](http://www.mma.gov.br/estruturas/imprensa/_arquivos/96_11122008040728.pdf)

<sup>9</sup> See: [http://www.mct.gov.br/upd\\_blob/0215/215071.pdf](http://www.mct.gov.br/upd_blob/0215/215071.pdf)

16. The EBRD's mandate is to nurture the transition to market economies in its region of operations, which is accomplished through the promotion of private sector development and mobilisation, the transfer and dispersion of market-based skills and behaviours, and the support of more efficient use and pricing of resources. As stated in GEF/C.31/5 (May 2007, Comparative Advantages of the GEF Agencies), the EBRD has considerable experience and a track record of success in market creation and transformation and ensuring sustainability through private sector involvement.
17. This mandate provided the EBRD with the unique background to have developed energy efficiency financing both as environmentally desirable and as a profitable business area that attracts private sector interest. Replicating this approach more widely can offer a valuable contribution to the global climate challenge. The EBRD's energy efficiency financing track-record has been developed as part of the Sustainable Resource Initiative (SRI), an umbrella initiative to mainstream and scale up the sustainable use of energy, water and materials in the EBRD's countries of operations.

#### A.4. The baseline project and the problem that it seeks to address:

18. The International Energy Agency estimates that global energy efficiency improvements can provide 42% of the CO<sub>2</sub> emission reductions necessary to limit the global average temperature increase at +2 Celsius above pre-industrial levels by the end of the century. A vast potential for energy savings opportunities remains unrealized even though financial returns are viable. The IEA estimates that even the full implementation of currently pledged energy efficiency policies around the world still leave untapped 56% of the current economically viable energy efficiency potential in industry, and some 80% of that in the buildings sector. To fully achieve such potential investments in energy efficiency need to increase from the current levels by a factor of 8 over the next two decades.
19. Scaling up energy efficiency financing is especially relevant in large, industrialised emerging economies such as China, India and Brazil. When combined, they account for 30% of the global energy demand and for a third of the global energy use-related CO<sub>2</sub> emissions. China is the largest energy consumer of the three, followed by India and Brazil, with India and China having some of the world's most energy intensive economies in the world (see: Figure 1 below).



**Figure 1: Energy and Carbon intensities (source: Enerdata Energy Statistical Yearbook 2014)**



20. Research conducted in the three countries during the preparatory phase of the project has revealed the importance of financial as well as non-financial barriers that prevent the scaling up of energy efficiency financing. Research has confirmed the following financial and non-financial barriers in the three countries:

#### ***Non-financial barriers***

- *Lack of knowledge and awareness.* Understandably, commercial banks typically do not have sufficient knowledge and understanding of energy efficiency technologies and their technical, economic, and financial characteristics, and have not fully developed approaches and techniques for project appraisal and risk assessment.
- *Communication between financiers and project developers.* Lenders have limited knowledge and awareness of energy efficiency project characteristics, while energy efficiency project developers often are unaware of the project packaging and presentation requirements of the financial community. This creates a difficult communication gap.
- *Risk perceptions.* Lenders may perceive energy efficiency projects as being more risky than their other conventional lending.
- *Estimation / measurement of energy savings.* Adequate methods and tools are not readily available to provide assurance regarding estimated energy savings.

#### ***Financial barriers***

- *High project development costs.* Energy efficiency projects have a relatively high proportion of costs that lenders are reluctant to finance. Such costs include project evaluation and project development costs as well as costs of equipment replacement, plant shutdown, and training of equipment operating and maintenance personnel.
- *Small project size leading to high transaction costs.* The relatively small size of energy efficiency projects (compared with, for example, energy generation projects or plant expansion projects) leads to relatively high transaction costs (compared with other conventional lending by banks and financial institutions), which, in turn, makes them less attractive for conventional bank financing.
- *Requirement for collateral or balance sheet financing.* Lenders usually require high levels of collateral or strong borrower balance sheets to provide financing. Energy users may not have collateral or strong balance sheets or may not be willing to commit their available collateral for energy efficiency projects. This is why clear presentation of the financial merits of energy efficiency projects is crucial for borrowers to prioritise balance sheet capacity.

21. Problems of high transaction costs, perceptions of uncertain risks, and unmet needs for financial intermediation or technical expertise mean that much of the potential for energy savings may remain unimplemented. Institutional innovation is required to address these problems and put in place efficient ways of identifying, packaging, and delivering bundles of energy saving projects.
22. All energy efficiency financing mechanisms must successfully incorporate two functions: (i) a marketing, project development, and technical design function to efficiently package good projects; and (ii) a financing function. As was discovered in research conducted, a common source of programme failure is inadequate balance between these two functions, leading to insufficient project pipeline development to meet the needs of financiers, or inability to arrange and deliver financing for well-developed projects.
23. Without the GEF project, the baseline scenario will involve a gradual increase in energy efficiency globally and in China, India and Brazil. The baseline in each focus country and region is discussed briefly below.

#### ***China***

24. In 2010 China became the largest energy consumer in the world; and China's energy consumption in 2014 was 3,034 Mtoe.<sup>10</sup> China's primary energy supply is predominantly based on coal (over 65% of primary energy supply), with non-fossil fuel energy sources contributing less than 10% of primary energy supply.<sup>11</sup> The rapid increase in coal-based energy consumption has also caused severe local environmental problems, such as air pollution, acid

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<sup>10</sup> Enerdata Year book 2014, see: <https://yearbook.enerdata.net/#energy-consumption-data.html>

<sup>11</sup> IEA, key world energy statistics 2014, see: <http://www.iea.org/publications/freepublications/publication/keyworld2014.pdf>

rains, and deterioration of surface water quality. China accounts for over 25% of global industrial energy consumption, and industrial energy consumption has increased by three-folds since 2000. The industrial sector contributes to 57% of final energy consumption and 74% of electricity consumption.

25. As China is still a developing country with a large number of people living in poverty, it has become a global priority to de-link China's economic growth and the increasing trend in energy consumption and GHG emissions. The International Energy Agency has projected that China needs to provide 30% of global savings in GHG emissions required by 2030, compared to the business as usual scenario to achieve the 450 ppm scenario.<sup>12</sup> It is further estimated that end user energy efficiency improvement and end user fuel switching (e.g., from more carbon-intensive fuel sources such as coal to less carbon-intensive natural gas and renewables) are expected to achieve 38% and 9% of GHG emission reduction required from China.
26. The 11<sup>th</sup> and 12<sup>th</sup> Five Year Plans introduced a range of new policies and programmes to address energy efficiency, with a focus on regulation of energy use, and regulatory or administrative policies to provide incentives and penalties to drive energy efficiency improvements. The 12<sup>th</sup> Plan included targets for reducing energy and emissions intensity (energy and emissions per unit of GDP rather than overall energy and emissions use) by 16% and 17% respectively. The plan also included goals for raising the percentage of non-fossil fuels in China's energy consumption to 11.4%.
27. The 13th Five Year Plan, the first to mention climate change, sets separate targets for energy intensity. China's target is that total emissions would peak by 2030 and that it would be drawing 20% of its total energy consumption from non-fossil fuels by 2025. Both those targets are likely to be ensconced in the 13<sup>th</sup> Five Year Plan and like the 12<sup>th</sup> Five Year Plan will likely be within the expected range and congruent with the 60%-65% reduction in carbon intensity from 2005 levels as was first announced in the Copenhagen COP talks and reaffirmed in Cancun in November 2014.
28. Congruent with these increased efforts to increase energy efficiency, the energy intensity in China fell by 11.4% during 2010–2014, slightly less than the previous four-year period of 19.1% during 2006–2010.<sup>13</sup> The contribution from structural changes in the economy has been less important during this period compared to the period 1980–2000, and most of the efficiency improvements were achieved through physical reduction in energy consumption per unit of production in industries.
29. Research conducted during the preparatory phase of the project has confirmed the energy efficiency market in China can be characterized as:
  - The Chinese “New Normal”, or the age of slower but more sustainable growth, entails that enterprises will seek to fine-tune operations, rather than expand them as so far, meaning there will be increased attention to investing in energy efficiency;
  - Unique policy momentum to develop and scale up energy efficiency as an area of focus for the financial sector given the drive of the establishment to rein in air pollution and GHG emissions;
  - Energy efficiency financing focuses on ESCOs, with narrow offer of simpler debt-based finance to large customers and SMEs;
  - About half a dozen banks involved in energy efficiency;
  - No focus on linking facility-wide energy audits in industry with bank financing;
  - Cooperation with multilateral and bilateral agencies has focused so far on the financial side rather than technical assistance to banks;
  - Opportunity for energy efficiency financing products to be developed in tandem with large project financing.
30. Other findings of note that were made during scoping activities in China:
  - The China Banking Regulatory Commission has been the driver for banks to include ‘green’ finance in their finance offering, via the Green Credit Guidelines it issued for banks in 2012.
  - Compliance with Green Credit Guidelines has been widespread with most banks able to apportion an amount of

<sup>12</sup> IEA, key world energy statistics 2015, see: <http://www.iea.org/publications/freepublications/publication/keyworld2015.pdf>

<sup>13</sup> Enerdata Year book 2014, see: <https://yearbook.enerdata.net/#energy-consumption-data.html>

‘green’ finance. However the definition of ‘green’ is possibly too broad with the focus on environmental and social compliance rather than energy efficiency.

- Banks provide ‘green’ loans motivated by compliance. Few banks were found to recognize the business opportunity to pursue ‘green’ add-on’s to existing loans. Except for the six or so Chinese commercial banks that have participated in international financial institution programs, few local financial institutions are interested in energy efficiency projects or have internal capacity to evaluate their cash flow benefit.
- In early 2015 the Regulatory Commission complemented the Green Credit Guidelines with Energy Efficiency Financing Guidelines for the development of energy efficiency credit extended by banking institution.<sup>14</sup>
- The banks’ concept of energy efficiency is overwhelmingly focused on energy transformation with almost no attention to reducing energy end-use.
- The EBRD proposition to share knowledge on scaling-up and mainstreaming energy efficiency finance was met with widespread enthusiasm from the banks involved in the discussions.
- Although they have developed various green lending products (with energy efficiency addressed via some of these), these are not origination focused but simply responding to clients’ financing request. Also, in most cases the green teams are not institutionally mainstreamed, acting in isolation from other business areas in the banks.
- Most banks recognized that a lack of capacity to originate projects efficiently was a key barrier to scaling-up energy efficiency finance. Origination of energy efficiency projects did not appear to go beyond IFC technical assistance.

## **India**

31. Despite clear decoupling between India’s economic and energy consumption trends due to the country’s impressive growth since the 1990s, India’s overall primary energy demand has more than doubled in the past two decades, with energy consumption increasing by 70% on a per capita basis. To fuel unprecedented economic and population growth, India has had to increase its reliance on readily available and cheaper fossil fuels, with the share of coal in the energy mix having grown by more than 200% and that of oil by almost 300% over the last 20 years. As a consequence CO<sub>2</sub> emissions have grown at a higher pace than energy consumption, having increased by 200% over the same period, making India the third highest emitting country in the world after China and the US.
32. Recognizing the importance of energy efficiency for the industrial sector, the Government of India and various state governments have taken a number of policy measures to promote energy efficiency. Most notable is the June 2008 ‘National Action Plan on Climate Change’ (NAPCC), which outlines steps that will be taken to address both development and climate-related objectives. It is being implemented through eight National Missions, one of which is the ‘National Mission for Enhanced Energy Efficiency’. This Mission specifically focuses on enhanced energy efficiency through increased investment, and attaches importance to the development and use of new technologies.
33. Industry accounts for 40% of the country’s primary energy consumption. The industrial and commercial sector is broadly divided into two categories of enterprises: the large corporates, and the MSMEs. The Bureau of Energy Efficiency, the country’s agency responsible to coordinate efforts in this field, has launched in 2012 an energy efficiency certificates trading scheme for the 500 largest industrial units. For the MSMEs sector, efforts have been targeted at enabling financing by banks as, despite MSMEs accounting for 45% of manufacturing output and employing 100 million people, they are not easy to bank.
34. Government mechanisms put in place in order to catalyse financing general technology upgrading and energy efficiency include:
  - A partial risk guarantee scheme to enable lending by banks to SMEs;
  - Partial grant schemes to support financing of technology upgrading and technology auditing;
  - BEE Venture Capital Fund for Energy Efficiency.
35. A number of other donor agencies have recently engaged in programmes focusing on financing energy efficiency; these includes:
  - The Japan International Cooperation Agency, KfW Bankengruppe and Agence Française de Développement have channelled credit lines of more than USD 600 million for energy efficiency in SMEs via the State Industry

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<sup>14</sup> See: <http://www.iipnetwork.org/CBRC-NDRC-EEGuide.pdf2>

and Development Bank of India, a state-owned development banking agency specifically setup to increase lending to SMEs;

- The World Bank and the GEF have setup a grant scheme to encourage lending by SIDBI to energy efficiency in SMEs, and to complement this with ample technical assistance to SME clusters, BEE and bankers in SIDBI;
- The Japan Bank for International Cooperation and USAID have extended credit lines for energy efficiency lending with ICICI, one of the country's largest private bank, with mixed success.

36. While these initiatives have increased energy efficiency financing in India, they have not addressed the fundamental absence of strategies, internal structures and deployment mechanisms such as add-on measures to operations already under consideration, as proposed by the GE2F2 Project, and which are required to achieve scalable energy efficiency financing.

37. In India there seems to be a gap in mainstreaming energy efficiency financing throughout the commercial banks. In brief, preparatory research and initial engagement missions in India have revealed the following general conclusions:

- An energy efficiency certificates trading scheme has been introduced by BEE for the largest corporates – it is widely believed these corporates have the capacity to take full advantage of their energy efficiency potential;
- Government-introduced guarantee schemes and technical audit programmes aimed at encouraging technology upgrades of MSMEs have resulted in the biggest state-controlled banks setting up products for lending to SMEs based on energy audits. However these appear to lack overall internal structures within banks that would result in critical market development. There is also no available information on the results of these programmes, most likely because: (i) banks have not designated energy efficiency as a business line so bankers do not have incentives to understand and prioritise it, (ii) technical audits are likely not investment-oriented so as to be understood by financiers, (iii) low awareness has been raised among all parties, and (iv) initiatives have not been of a critical size to mobilise market development.
- Most multilateral and bilateral programmes are conducted via SIDBI, showing that commercial banks do not readily lend to MSMEs or to energy efficiency. Even these SIDBI programmes seem to pursue energy efficiency opportunities via separate banking units and not as add-on measures to operations already under consideration;
- SIDBI-based programmes that closely resemble the SEFF approach are those supported by JICA which uses a list of eligible technologies for speedy approval, and the World Bank-GEF, which seems to provide ample training and capacity building;
- There is potential to build on such programmes and credit lines but there is a clear gap in mainstreaming energy efficiency financing throughout the commercial banks;
- Based on the banks engaged during the PPG phase, the understanding was that despite the many schemes currently underway, efforts made so far to develop energy efficiency financing for the SME sector remain subscale and not mainstreamed.

## **Brazil**

38. Like India, Brazil is one of the highest energy consumers with a high growth rate of energy use. Total primary energy consumption in Brazil has increased from 210 Mtoe in 2004 to 306 Mtoe in 2014, a 46% increase.<sup>15</sup> Overall, energy consumption per unit of GDP is increasing, as are GHG emissions per unit of GDP (albeit from a low base given the high level of hydroelectricity in energy supply). As a result of economic expansion, industrialization and growing urbanization during the 1970- 2000 period, Brazil's power sector grew fast. Within overall energy supply, electricity went up from 19 to 41%, the use of firewood, charcoal and sugar-cane bagasse dropped significantly (from 40 to 20%). Presently, electric energy use is growing at a rate of 2.7 % per year.<sup>16</sup> To meet power demand, while simultaneously avoiding pollution-related impacts, the Government of Brazil is following a three-prong approach: a) introducing wide power sector reforms, including pricing and regulations, to enhance competition and private sector participation; b) encouraging energy efficiency and energy conservation measures; and, c) encouraging the demonstration and deployment of renewable energy technologies.

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<sup>15</sup> *ibid*

<sup>16</sup> See: <https://yearbook.enerdata.net/energy-consumption-data.html#electricity-domestic-consumption-data-by-region.html>

39. In the medium and long term there are clear prospects of electric power consumption growth based on a) projected population growth (from 167 million inhabitants in the year 2000 to nearly 200 million inhabitants in 2015), and b) on-going economic expansion. The forecast from 2000 to 2015 suggests that electric power consumption will outpace growth in GDP. In particular, the industrial sector in Brazil requires a more long-term policy for energy efficiency as it currently makes up to 40.7% of the total energy consumed in Brazil. While existing programs for energy efficiency tend to focus on the residential areas and commercial and private sectors, these account for only 15.8% of the total energy consumed.
40. The government of Brazil has been actively promoting energy efficiency activities for the last two decades. However, despite various initiatives and efforts to stimulate the market to improve energy efficiency, there remain significant barriers to implementing such measures that involve both marketing to consumers and financing.
41. While little attention has been given to industrial energy efficiency, efforts are underway to address barriers in the energy efficiency market for buildings in Brazil, through the launch of the GEF-supported Energy Efficiency Guarantee Mechanism (EEGM), which aims to address the lack of specific financing mechanisms and related expertise. The EEGM, an initiative of the Inter-American Development Bank (IDB), together with UNDP, applies to energy efficiency projects where the energy savings are guaranteed by an energy service company. The sum of those savings must be higher than the incremental cost of implementing the energy efficiency project. Only proven methodologies and technologies are eligible to receive partial credit guarantees.
42. In brief, the energy efficiency market can be characterized as follows:
  - No decoupling effect between economic growth and energy consumption was observed over the past two decades;
  - High reliance on hydrogeneration and increasing and expected disturbances in hydrological cycles has brought energy efficiency to the forefront for policymakers;
  - Limited range of instruments for energy efficiency financing including partial guarantee instrument supported by Inter-American Development Bank and utilities based energy efficiency activity via ESCOs;
  - The economic slowdown of the past year, which is expected to become the norm in future, has created a context similar to other slowing emerging markets, where enterprises will seek to deploy financing capacity towards increased efficiency rather than expansion; banks will have to address this financing demand;
  - Like India and China, commercial banks don't currently treat energy efficiency financing as a mainstreamed business line, with efforts over recent years having been dedicated almost entirely to renewable energy;
  - Financing specifically targeting energy efficiency is channelled by BNDES at concessional rates and through dedicated credit lines to banks, which shows that commercial banks themselves do not see this business area as visible enough and self-sustainable so as to resource it themselves;
  - EBRD preliminarily engaged BNDES who confirmed possibility for good synergy between BNDES credit lines to banks and EBRD sharing of expertise.

#### ***EBRD's Energy Efficiency Financing Experience***

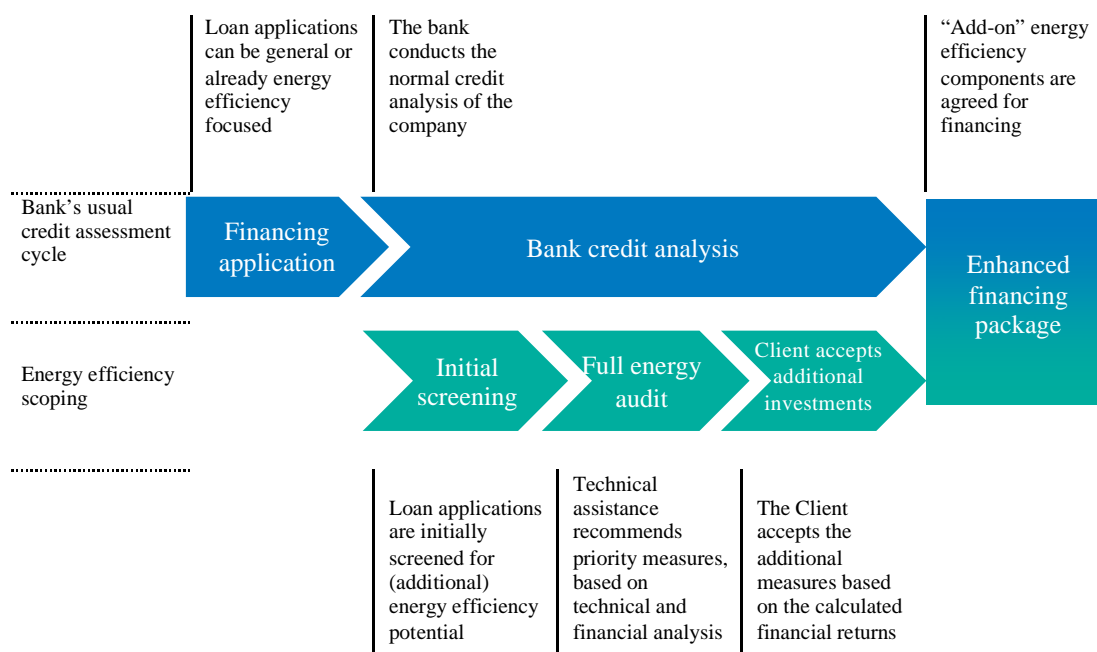
43. Energy efficiency has been at the centre of EBRD's activities among the range of solutions that contribute to the global low-carbon shift. This unique expertise is owed to the special transition characteristics of the EBRD's region of operations, which has been marked by a high share of energy-intensive and inefficient industries, rising energy prices and the need to foster the competitiveness of the private sector. These same characteristics have shifted in the past decades to the some large developing economies of the globe. These are now currently also marked by rapid energy-intensive industrialisation, an emerging need to enhance the role of the private sector, and to meet rising energy demand and environmental challenges.
44. The aim of the MSP is to transfer and adapt the EBRD experience in mainstreaming and scaling up energy efficiency financing in its traditional region made up of economies in transition, directly to other banks operating in large developing economies which are expected to make considerable contributions to addressing the global climate challenge. As such, the EBRD experience is considered to contribute to the current, global, baseline of the project.
45. In 1994 the Bank setup a dedicated energy efficiency investments team with its portfolio separate from the other sector-focused banking teams. This model resembled what most commercial banks with an interest in energy

efficiency financing have today. At EBRD this setup was of limited success. This is because energy efficiency opportunities can be part of projects in many economic sectors rather than a standalone sector.

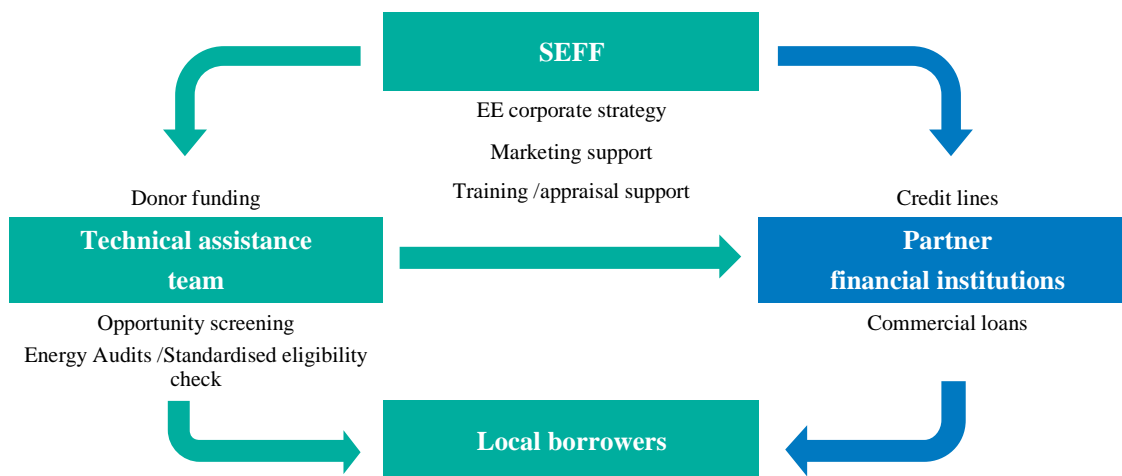
46. Recognising this, in 2006 the energy efficiency team was reorganised into an investment advisory team that works alongside other banking teams to integrate energy efficiency and renewable energy elements into a wide variety of projects. In parallel, the Bank's capacity to track and report such elements was also strengthened, and sustainable energy financing targets were gradually adopted. As a result, in 2006–2014, EBRD finance to sustainable energy amounted to roughly \$20 billion, of which \$15 billion has been for energy efficiency projects or project components. The share of sustainable energy finance in the Bank's annual business volume increased from 5% in 2002-2005, to 28% in 2012-2014.
47. At the heart of this effort to scale up energy efficiency financing, there has been a streamlined process of identifying projects or clients under consideration for Bank financing, which have energy efficiency financing potential. Clients with high potential are offered full energy auditing services or simpler energy efficiency investment advice, in parallel to the creditworthiness assessment underway for the initial financing request. The scope is to “cross-sell” energy efficiency components (when initial financing requests are not for energy efficiency) or to “up-sell” energy efficiency (if better solutions than those presented can be recommended).
48. Energy audits are provided at no cost to the client, but include the mandatory involvement of the client's engineer or plant manager, to create local ownership of the eventual project. EBRD and the client's engineer or plant manager present the identified energy efficiency priority measures and their financial savings to the client's CEO or CFO during the negotiations of the original financing request. Clients have the option to include these in the final financing package. 50% of the companies offered audit services in 2006-2014 implemented the identified energy efficiency measures. Overall, EBRD's energy audit programmes have returned approximately \$150 of signed EBRD energy efficiency financing for every \$1 spent on providing technical assistance.
49. This consistent scoping of energy efficiency opportunities has been replicated at the level of the EBRD's local partner banks with their own client bases, via the SEFFs. SEFFs incorporate credit lines with dedicated technical assistance helping local banks to develop energy efficiency business lines. As part of a SEFF, local banks are assisted in:
  - Adopting corporate-level strategies to prioritise sustainable energy financing as a business line;
  - Developing a “screening” process for energy efficiency opportunities so as to build up a pipeline of financeable projects;
  - Developing streamlined project appraisal tools to enable the credit analysis of these projects; such tools are broadly of two types: custom energy audits, similar to how EBRD offers energy audits for its clients; or based on a pre-assessed standardised list of high-saving energy efficiency technologies which can be recommended for smaller-scale borrowers;
  - Training staff to appraise energy efficiency projects and in marketing activities.
50. Via the SEFFs the EBRD developed a network of 100 energy efficiency financing banks in 20 countries which have financed to date over 90,000 loans for industrial, commercial and residential energy efficiency. This way of working with the local banks ensures durable development and outreach of energy efficiency financing market by leveraging the local networks and existent capacity of banks in each country.
51. In summary, the EBRD energy efficiency financing model has been characterised by:
  - Clear executive strategy to mainstream energy efficiency financing at organisational level, via dedicated resources and clear business volume targets (in terms of the share of sustainable energy in the overall business volume of the Bank);
  - Dedicated in-house staff with both technical and financial capabilities to assess energy efficiency opportunities, or dedicated resources to call-off external consultancy services;
  - An origination-focused approach starting with a simple process to consistently “screen” the Bank's projects pipeline for energy efficiency opportunities;
  - Streamlined tools to follow up on technical opportunities and translate them into bankable investment packages;



- Simple financing structures – the majority being corporate on-balance sheet lending, based on the proven energy cost savings generated; this is why client buy-in at senior management level is crucial from the onset so that energy efficiency is prioritised for balance sheet capacity;
  - Enhanced attention to tracking results via simple systems, thus providing visibility on progress and to potential external donors;
  - Replication of this experience with over 100 partner banks which have been enabled to develop similar energy efficiency financing business lines.
52. Expanding its region of operation, in 2013 the EBRD started investing to support the transition challenges in the South Eastern and Mediterranean (SEMED) region (specifically in Egypt, Jordan, Tunisia and Morocco) in the aftermath of the revolutions in the region. One of these challenges includes fine-tuning these economies to use energy resources more efficiently following decades of locking-into carbon intensive energy infrastructure and subsidised energy costs. Egypt and Jordan present energy intensity levels of GDP equal or higher to the EBRD region average. While among the lower-ranking countries, Morocco and Tunisia display energy intensity levels equal to those of economies like Turkey and Poland, despite their warmer climates and smaller energy intensive economic sectors. In parallel to the submission of the initial GE2F2 MSP proposal, the EBRD started developing channels to share the SEFF model in these new countries of operations. Unlike with the three large economies outside of EBRD’s investment mandate, the SEMED countries can benefit directly from EBRD investments.
53. Egypt is one of these economies, which like Brazil, China and India, has a large and fast-growing population, is pressured by continuous urbanisation and industrialisation trends, and is forecasted to increase its share in global emissions whilst also suffering significantly from future climate impacts. The Egypt SEFF, developed and launched in tandem with the current MSP, is part of the wider objective of this Project to diffuse throughout large emerging economies the EBRD model of energy efficiency financing directly with banks. While GEF assistance is required in sharing this model in Brazil, China and India, the EBRD could directly invest in Egypt’s financial sector, supporting the wider delivery of global environmental benefits.



**Figure 2 EBRD's energy efficiency financing "add-on" model**



**Figure 3 EBRD's generic SEFF model**

- A. 5. **Incremental /Additional cost reasoning**: describe the incremental (GEF Trust Fund/NPIF) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF/NPIF financing and the associated **global environmental benefits** (GEF Trust Fund) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project:
54. The baseline as presented in Section A.4. reflects the steady progress of the three large emerging economies of Brazil, China and India in enhancing energy efficiency. However, energy efficiency developments are likely to lag behind the pace of economic growth, energy demand growth, urbanisation trends and the continued expansion of the middle class. In parallel, there is continued development of energy efficiency markets in EBRD's "traditional" countries of operations made up mostly of economies in transition, and new initiatives to foster energy efficiency support in the SEMED region, with a particular focus on Egypt which reflects similar trends as those noted above for the three larger economies.
55. One crucial lever to accelerate energy efficiency market development in these large emerging economies, which remains insufficiently harnessed to date, is the fostering of commercial energy efficiency financing through the local banking sector. In its region of operations, the key value-added of the EBRD model has been that of leveraging local banks to understand energy efficiency financing as a business opportunity.
56. During the PPG-supported phase, the EBRD was invited to present its model directly to commercial banks. A key bottleneck to wider scaling up of energy efficiency financing among many commercial banks was found to be the lack of origination capacity rather than the lack of funding.
57. Therefore, the Project seeks to contribute to the acceleration of energy efficiency financing globally by raising the profile of the proven EBRD model with commercial banks within and beyond the EBRD's region of operations. The approach is to:
- Offer energy efficiency corporate planning assistance directly to interested banks in China, India and Brazil, to demonstrate how commercial banks in these countries can enhance their capacity to originate and appraise energy efficiency projects, and
  - Raise the awareness and understanding of this direct work, as well as EBRD's SEFF experience to date, via a network of energy efficiency financing banks brought together by a specialist consultancy or consortium of consultants and the EBRD.
  - In parallel, the EBRD will continue the development and rollout of SEFF programmes in the more recently added countries of operations, especially in Egypt.



58. The Project's bottom-up approach focuses on working directly with interested commercial banks in Brazil, China and India to facilitate the adoption of an energy efficiency financing model similar to that of the EBRD. This approach ensures that the relatively limited resources available under the Project will be used efficiently and in a flexible manner, resulting in maximum demonstration impact.
59. The aim is to build up the capacity of the banks, on a pilot basis, to setup corporate structures and their origination and appraisal expertise to ensure the sustainability of energy efficiency financing programmes. As a direct outcome the project will begin to address non-financial barriers such as: lack of knowledge and awareness of energy efficiency potential; communication between financiers and project developers; risk perceptions and; reliability of energy saving estimation. As a result of establishing the internal systems and capacity for origination of energy efficiency projects in partner banks and the development of their own banking products and familiarity with energy efficiency financing over time, the local banks will begin to address the financial barriers directly through provision of energy efficiency finance.
60. This approach ultimately aims to provide tools and lessons learned of how commercial banks can adapt strategies to mainstream and scale-up energy efficiency financing. There is now an immediate need to deploy the technical assistance necessary to enable the front-running banks to implement their energy efficiency financing Action Plans. The tools and lessons learned from the Project may form the basis for a future full-project proposal for a financing programme aligned with the GE2F2, however this remains to be decided following an evaluation of the Project's impact<sup>17</sup>.
61. The immediate focus of the Project is on assisting banks in China, India and Brazil to develop strategies and deployment mechanisms for financing energy efficiency, in parallel to EBRD's own deployment of the model in Egypt and other countries where the Bank expanded its operational mandate. The Project seeks to achieve four outputs that are described in more detail in the section below:
  - Output 1 – Supplemental market studies and engagement workshops for China, India and Brazil completed
  - Output 2 – Banking strategy and action planning developed
  - Output 3 – Targeted technical assistance deployed for energy efficiency financing capacity building with GE2F2 partner banks
  - Output 4 – GE2F2 knowledge exchange and dissemination established.

***Output 1: Supplementary market studies and engagement workshops for China, India and Brazil completed***

62. During the Project's preparation, initial in-team market reviews were first undertaken to inform the Project's design and to facilitate stakeholder consultations. The EBRD presented its model directly to local banks via workshops facilitated by national stakeholders. In return, representatives of banks informed of the corporate structures in place at their organisations, their activities and the local context for addressing energy efficiency projects. This exchange was found to be practical and effective, and therefore is proposed as the Project's engagement approach.
63. Consistent with the bottom-up work-stream, two broad activity areas will be pursued in each of the three counties:
  - (i) Engagement of the local banking community on the ground via workshops focused on presenting the EBRD model and exchanging information and experiences;
  - (ii) Supplementary market reviews, only where necessary, to inform the team about the local environment and allow for more effective support for banks' energy efficiency efforts.
64. The supplementary market reviews, if commissioned, are proposed to be targeted and succinct, to provide guidance of the implementation team when engaging with the banking communities in China, India and Brazil, and only if needed following initial engagement. Such market reviews may include to the following aspects:
  - A review of the energy consumption balance, energy demand growth trends and energy intensity of the economy;

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<sup>17</sup> Decisions on GEF pipelines are dependent on priorities of the countries in question and those of the relevant GEF implementing agencies. Inclusion of the idea that deployment may include GEF funding does not imply that this has or will be agreed. Consultation and agreement on these and other funding strategies will be pursued throughout the project but particularly under output 2, and depend on decisions of the stakeholders in question.

- A snapshot of the national banking sector, enumerating the main financial regulatory/ governmental bodies and the main banks;
  - An enumeration of the key barriers to scaling up energy efficiency finance in sectors with key potential for energy efficiency financing;
  - A review of the policies and activities relevant for energy efficiency financing including any relevant previous programmes setup via international development cooperation programmes.
65. Direct engagement of the local banking community will be pursued via workshops and/or seminars. The success of this engagement depends in part on the local "enabler", such as was the case of the Chinese Banking Regulatory Commission for workshops undertaken to date in Beijing. It is foreseen that for these engagement activities the Project will work with Chinese Banking Regulatory Commission in China, Exim Bank in India, and the Brazilian National Development Bank for Brazil.
66. The written outputs of this step in the MSP work-stream will consist of the back-to-office reports from the engagement missions and market context reviews.

## ***Output 2: Banking strategy and action planning developed***

67. Output 2 will initiate the processes necessary to ensure the successful transfer of the proven EBRD model directly with front-runner banks and will identify the capacity gaps for origination, development and deployment of energy efficiency financing business lines. Upon the initial country engagement, banks interested to participate in the knowledge sharing initiative will be invited to draft their own energy efficiency financing action plans or strategies.. Based on the EBRD SEFF experience, the project team has developed a template strategy.
68. Requiring that banks draw up their own strategies will ensure: early ownership of the energy efficiency mainstreaming efforts, prospective dedication of internal resources, as well as the identification of a level of scope and ambition for the action plans that the banks find appropriate.
69. This process has trialled and proven successful in identifying, engaging, and creating buy-in with potential pilot banks during the project preparation period. At least one interested bank reverted rapidly, with the initial action plans draft requiring further advisory inputs and cooperation with the EBRD-based project team. The aim of this exchange is to refine such strategy documents so as to fit with the banks' scope of ambition and Project's capacity to provide technical assistance based on the MSP resources.
70. The action plan template provided by the EBRD and can be further recommended as the basis for GE2F2 partner banks to develop their own, covers all aspects of corporate planning related to mainstreaming energy efficiency financing. Prospective partner banks are expected to include some or most of the following elements in their action plans (presented in summary):
- Coverage: choosing a particular sector or regional coverage for the Action Plan to target;
  - Product definition: choosing the energy efficiency financing products which should be promoted under the action plans (e.g. custom add-on energy efficiency lending components, standardised energy efficiency equipment lending, financing in a particular sector, etc);
  - Process mapping: defining eligibility criteria for clients and projects; mapping workflows for how the clients /projects are assessed for their energy efficiency financing opportunities;
  - Team structure: e.g. a centralised energy efficiency financing team as at EBRD, or experts deployed across the organisation;
  - Drivers of performance: defining the scope of ambition for the piloting of the action plan, including relevant performance indicators;
  - Training strategy: defining a training strategy for credit /client relations managers;
  - Marketing strategy: defining an outreach strategy for the product;
  - Progress tracking mechanisms: defining and adopting a results tracking system that is simple and that should ideally be easy to aggregate for all participating banks at MSP level;
  - Identification of resources and of expertise gaps: map out the resources, especially human resources, necessary to implement the action plan and the expertise gaps for which the MSP could fund short-term advisory assignments to develop the capacity of the bank. These will be presented to the EBRD for discussion.

71. The last aspect above, regarding resources, would form the basis for the activities to be delivered for each GE2F2 partner bank as part of Output 3 below. As part of the action plan drafting effort banks will identify the internal resources they can commit to the energy efficiency financing mainstreaming effort, as well as the implementation capacity and expertise gaps which they may encounter. These gaps will then be considered to be complemented with MSP resources.
72. Commitment of own internal resources by GE2F2 partner banks towards delivering the action plan represents an important source of leveraged financing to the initiative.
73. The written outputs of this step of activities in the MSP work-stream will consist of: (1) the EBRD template of an action plan to mainstream energy efficiency financing; and (2) the various action plans developed by GE2F2 banks. However such bank-specific action plans will be treated with confidentiality between the project team and the interested bank, with simplified versions of these to be agreed to be presented as outputs for the MSP.

***Output 3: Targeted technical assistance deployed for energy efficiency financing capacity building***

74. Output 3 focused on the deployment of technical assistance necessary to overcome capacity gaps identified by the partner banks under Output 2. After banks identify implementation capacity gaps in relation to their action plans, the project team will consider deploying targeted short-term technical assistance to address them from a roster of technical experts. The aim is to build up the capacity of the banks, on a pilot basis, to develop durable corporate structures and their origination and appraisal expertise of energy efficiency projects.
75. Since the needs that the banks may identify will be varied, the Project will establish a roster of technical experts. Individual technical assistance assignments will be called off from the roster for each partner bank according to the agreed resources supplementation with the EBRD. This effort will build on the EBRD's network of expertise established via the SEFFs.
76. The sub-outputs outlined below, at point 3.2, will be varied according to the needs of each pilot bank. As such, the items presented below may or may not be applicable to the work with each partner bank.

**Sub-output 3.1: Technical support mechanisms established for the GE2F2 partner banks**

77. To address the implementation capacity gaps identified in the energy efficiency mainstreaming action plans, the EBRD will compile and manage a roster of technical experts, drawing on its experience with the SEFFs. The roster of experts is considered appropriate because:
  - The GEF resources are likely too limited to allow for three SEFF-like country implementation teams, so it is key to use such resources via a flexible structure that is as focused as possible on offering technical assistance only where it is crucially needed.
  - The basic objective of the GE2F2 initiative is that participating banks develop and internalise the processes to identify, appraise and finance bankable energy efficiency investment projects. As such, it is crucial that they commit own resources to the mainstreaming efforts and from an early stage. It would be highly undesirable that a SEFF-like team is deployed to showcase the EBRD energy efficiency financing model on a short-term basis while banks do not attempt adopting internal structures and resources to continue this work.
  - The nature and the extent of the implementation skill gaps the GE2F2 partner banks in the three countries will report are uncertain at this stage and likely to be different from one bank to another; as such, the concept of a roster of experts who could be called-off for different skill gaps is more appropriate to pre-empt a potentially large variety of needs;
  - A roster of expertise also provides a rapid and flexible deployment solution for assignments, which can vary in duration and in urgency.

78. It is envisaged that the selection process may be structured into “windows” of activities corresponding to the different types of assistance modules described below under Sub-output 3.2 (paragraph 80).
79. These external experts or teams of external experts, established as part of the roster under sub-output 3.1 and providing technical assistance under sub-output 3.2, will be contracted by the EBRD. The contracts and assignments will be managed by the EBRD, and corresponding remuneration will be paid by the EBRD from the funds made available through the Project from the GEF Trust Fund. In some cases where expertise is deemed very specific the EBRD may contract experts directly based on the known experience in SEFF activities. Such appointments will also be contracted, managed and paid by the EBRD. Additionally to direct appointments, the EBRD may also need to enhance internal administrative and managerial capacity in relation to the GE2F2 programme by means of its usual hiring policies.

**Sub-output 3.2: Targeted technical assistance assignments deployed for energy efficiency financing capacity building with GE2F2 partner banks**

80. Based on the expertise and capacity gaps identified by the banks via their action plans and the roster of experts, targeted technical assistance assignments will be deployed to assist each bank in setting up mainstreaming approaches to energy efficiency financing similar to the model used by the EBRD. It is expected that banks will aim at a small-scale piloting of such structures. The type of technical assistance assignments may be the following:

- a) *Planning oversight and strategic advisory for mainstreaming energy efficiency financing* – refers to advice on mainstreaming corporate planning and process mapping, but also general coordination of engagement between the partner bank and the EBRD the specialist consultancy/ consortium teams.

The generic advice, about refining the Action Plan and about process mapping, may also include assistance with the definition of the product being targeted for development. At the EBRD, two such products have been successful:

- *Custom energy efficiency loans*, based on the assessment of clients’ energy use (usually applicable to larger-scale investments; requires specific technical expertise throughout the implementation period of the Action and for each assignment individually); or
- *Standardised energy efficiency loans*, based on pre-determined lists of eligible equipment and interventions (usually for smaller-scale investments; involves specific technical expertise only when determining the list of eligible measures that can be financed; can then be rolled-out by loan officers trained to use the list in offering suggestions for energy efficiency financing to clients).

- b) *Setting up processes and procedures to screen client and project pipelines for energy efficiency financing opportunities* – this represents the origination end of the energy efficiency financing project cycle.

At the EBRD in-house experts regularly “screen” the EBRD projects pipeline for opportunities to scope energy efficiency financing operations either as: (1) energy efficiency components added onto a wider non-energy efficiency investment package (the “added-on” lending model), or (2) as an energy efficiency only project.

The screening process is simple and integrated with the Bank’s regular operations tracking systems, and it ensures that opportunities are consistently screened for. It involves the definition of criteria to screen existing clients or incoming financing applications, such as: the sub-sector (with projects in energy intensive sectors having high potential to add-on energy efficiency measures to otherwise general financing requests), the type of project (for instance, for investments in new equipment, more energy efficient technologies may be recommended), the size of the project (where energy efficiency measures can help achieve better profitability for big clients), etc.

- c) *Building capacity to address energy efficiency opportunities via custom investment assessments* – this refers to the energy use auditing methodology deployed to assess some of the identified opportunities.

At the EBRD, this is done via in-house or externally hired technical assistance teams, of engineering and financial experts, who are able to assess the energy usage of clients, and recommend energy efficiency investments based on their payback from energy and operational cost savings. The energy audit programme is

crucial in translating technical opportunities into bankable packages. However, audits may be costly as an origination tool, so it is key that operational efficiency gains are exploited via adopting calling-off procedures that are streamlined with the usual credit assessment cycle of the bank.

As such, this module of expertise may target sharing the EBRD experience of the setup needed to call off energy audits technical expertise and the outputs expected from such work: process mapping and resourcing, terms of reference, appraisal forms, etc.

- d) *Demonstrating the customised energy efficiency assessment tool in practice via limited on-site assessments* –the deployment and management by the EBRD of an energy auditing team to work for the benefit of the partner bank and formulate customised investment packages with select clients.
- e) *Building capacity to address energy efficiency opportunities via standardised lists of technologies and equipment* – unlike the energy audits, this tool was developed as part of the SEFFs to allow banks to more easily recommend technology upgrades based on pre-established lists of technologies.

The bulk of costs in setting up such a structure are incurred at the beginning when the list of technologies and suppliers is being compiled. Afterwards, the bank's client relations manager can easily access the list and recommend more advanced technologies for clients based on the list, without the need for a customised technical assessment. This works well for small loans. It may be the case that some Chinese banks may want to develop such a list-based tool.

- f) *Building up the tracking and reporting capacity of the partner banks* – this type of assignment would aim to assist the banks in developing simple ways to report on their energy efficiency financing progress, both in terms of finance and ex-ante physical impact.

The key components of such a system are: (1) a simple methodology to establish what to mark as energy efficiency finance, and to estimate the energy savings and/or the greenhouse gas emission reductions impact expected from the project; and (2) a simple system to record and report on these figures. At the EBRD, sustainable energy finance amounts and the estimated physical impact of projects is easily recorded and reported on based on the Bank's usual operations tracking system.

It is noted that it will be up to each partner bank to setup and use such tools following the EBRD-managed advisory assignment.

- g) *Training credit officers and client relations managers* throughout the partner bank to understand the business benefits and the selling points of energy efficiency. Such a module would draw up on similar experience developed with SEFF partner banks.

A key success factor in mainstreaming efficiency financing is that the banks' client relations managers know to refer clients with potential to the energy efficiency financing team or to use the energy efficiency scoping tools, rather than one generic energy efficiency team managing this sector in isolation. It is key that interested partner banks are assisted in disseminating energy efficiency financing knowledge throughout the pilot perimeter of the Action Plan.

- h) *Marketing energy efficiency financing* – advice on marketing and outreach activities for the partner banks, once they define the financing product and processes. This may again draw on extensive similar experience that EBRD has had with the SEFF partner banks in its region of operations.
- i) *Other assignments* may refer to other specific needs such as experience exchange assignments for staff members from the partner banks, or translation and adaptation services for the generic transfer of the architecture of the EBRD energy efficiency financing model.

81. It is expected that each partner bank will require a different combination of such assignments, depending on its needs, and that some of the above mentioned types of assignments may not be called-off at all. The end results of the deploying these various technical assistance modules will be that:

- The capacity of the partner banks to originate and to appraise energy efficiency projects will have been enhanced. It is expected that this will be reflected in corporate structures being developed to identify energy efficiency opportunities, to call-off the appraisal expertise to translate such opportunities into bankable propositions, to scale up the awareness of bank staff in terms of energy efficiency, to record and to report on the progress and results of energy efficiency projects.
- The banks will have developed specific energy efficiency financing products, whether these take the form of a special business advisory function tool (such as something similar to the energy audit programmes at EBRD or the technology lists approach used in some SEFFs), or a very specific financing product (i.e. lending for a specific client sector).
- A first few pilot projects will have been scoped and financed as part of this effort, and expected results of such projects will be fed at central GE2F2 initiative level.
- Partner banks will be encouraged to liaise with potential providers of technical assistance resources, especially to seek to access support from other GEF agencies.

82. The written outputs of these activities will be varied, according to the type of the assignments being called-off. Much of the capacity building activities are expected to help towards the adoption of procedures and protocols for all the workflow steps involved in scoping energy efficiency financing opportunities at each partner bank. However, it is expected that, at initiative level the following will be made available:

- Generic and non-confidential methodologies, templates, procedures;
- It is expected that the capacity building experiences will be documented in a format that enables the lessons learnt from these activities to be shared;
- The reported results (finance and impact) from the potential projects scoped as part of the action plan rollouts.

#### ***Output 4: GE2F2 knowledge exchange and dissemination established***

83. The aim of the Project is to showcase globally the energy efficiency financing experience as an example of how the outreach, finance clout, and business drive of banks can be leveraged to develop and scale up energy efficiency markets sustainably. The EBRD has initiated and continues such work in its countries of operations via both financing and technical assistance. The Project will enable the EBRD and the specialist consultancy or consortium of consultants (the “partner organisation”) to share this knowledge on a limited basis in emerging markets that are crucial in the global climate change challenge.

84. Given that the EBRD’s engagement outside its region of operations can be very limited, targeted, and focused on knowledge sharing only, the partner organisation will take the lead on this Output. The experience of the Project as well as that of the EBRD work in its region of operation will be showcased more widely by the partner organisation via its established global outreach, to disseminate lessons learned.

85. The partner organisation will make the Project’s achievements visible and ensure the longevity of the GE2F2 interventions via two elements: a central knowledge exchange platform, and a series of dissemination events.

#### **Sub-output 4.1: Knowledge exchange platform**

86. The experiences of the Project, as well as the lessons learned from the on-going EBRD energy efficiency financing work in its own region of operations, will be centralised at the GE2F2 level in the form of a website to be managed by the partner organisation. The website will be designed as an open resource centre, which could be hosted by the consultants to facilitate access and visibility by other banks willing to develop energy efficiency financing business lines.

87. Additionally, a knowledge network will be gradually established during Project implementation between representatives of the EBRD, the partner banks and other GEF agencies. This network will facilitate links and knowledge exchange between partner banks, GEF agencies and other key stakeholders.

88. Briefing and exchanging experiences with other GEF Agencies are seen as crucial for the sustainability of the Project’s outcomes. Briefing and coordination will be sought in the context of the knowledge network and exchange platform. Such efforts will especially target sharing of experiences related to the banking systems of the three countries and energy efficiency contexts.

## **Sub-output 4.2: Dissemination events**

89. The other knowledge sharing activities to be led by the partner organisation, in cooperation with the EBRD, are energy efficiency financing knowledge sharing events. It is expected these events will be in the form of seminars or workshops, and will bring together national and/or multilateral stakeholders to further disseminate the energy efficiency financing experience from the SEFFs and the GE2F2.
90. The events are expected to be the following:
- (i) One event each at national-level, in China, India and Brazil, to engage more widely with the banking sector and financial regulation community about the results of the GE2F2 assistance. This will be organised with the pilot partner banks, since the EBRD will have engaged locally at the start of the programme via activities under Output 1.
  - (ii) At the multilateral-level, one event will be organised to share the experience of the MSP activities with other IFIs and other commercial banks. The format of such events may likely follow a panel-like knowledge sharing format, discussing the MSP and SEFF lessons learnt. The event will likely be joined with similar forums of conferences in the field, such as the EBRD annual SEFF forum.
91. Already EBRD coordinated the first such event in September 2015, planned on the occasion of the annual conference of EBRD SEFF banks. It took the format of a forum of energy efficiency financing institutions, where EBRD SEFF partner financial institutions and UNEP-Financial Initiative partners have been invited. The aim of the forum was to share lessons learnt about energy efficiency financing, business development and policy contexts in the run-up to the UNFCCC 21st Conference of the Parties, in Paris in December 2015. One of the main outputs of the forum has been a collective declaration of intent to further integrate and scale up energy efficiency financing as a business area of the endorsing financial institutions. The GE2F2 activities are one of the channels that will enable this in practice.
92. GEF partner agencies will be engaged to facilitate GE2F2-specific side-events and workshops to their regular conferences, sustainability themed weeks, or other events they may host. The EBRD will also seek to do likewise with any multilateral event it may organise which focuses on energy efficiency financing. This is a practice that the EBRD has managed previously in the context of multilateral conferences.

## **Incremental reasoning**

93. Baseline developments involve the continued gaps in addressing the energy efficiency potential of emerging, newly industrialising economies, like China, India and Brazil. Commercial financing in place to serve these gaps remains inadequately sized and not streamlined enough through the local banks in order to scale up to its full potential. Similar trends exist in the SEMED countries, with Egypt
94. During preparation of the RCA, experience in China was that only very few banks have developed something close to a mainstreamed approach to energy efficiency project scoping, while most others regard energy efficiency as a compliance item rather than a business opportunity. In most cases energy efficiency financing is considered in isolation and is addressed by a separate team that meets financing requests rather than actively originating them, and is mostly conducted via structured finance setups rather than simple balance sheet lending. Similar experiences were seen in India and Brazil.
95. However, progress will take place in the absence of the Project. While this baseline reflects favourably the work that has been done by national governments and multilateral organisations, the business-as-usual scenario is unlikely to deliver the comprehensive, sustainable and replicable financing structures that are needed to achieve the full potential of energy efficiency as a tool of considerable climate change mitigation. As such, any additional input in developing the market for energy efficiency financing should be deployed to further accelerate this progress.
96. Demonstrating the EBRD model directly with banks in the three markets where energy efficiency can make a considerable difference at the global scale is seen as a way of accelerating progress compared to baseline developments. Showcasing this experience, as well as the EBRD SEFF experience will further raise the profile of a model that has worked in practice.

97. The EBRD experience in mainstreaming energy efficiency financing is regarded as uniquely valuable in the current context of international climate change negotiations. Some of the macro-level issues often quoted, and which the EBRD model and the current MSP may address, are:
- There is a global need to scale up private sector mobilisation. The EBRD experience of developing local energy efficiency financing markets via local banks provides a good example of building durable, sustainable channels of mobilising local, commercial financing to many economic agents;
  - Developing financiers' understanding of energy efficiency opportunities. At present, many banks seem to oversee energy efficiency opportunities with their existing clients, because they do not have in place streamlined appraisal processes to bring together the technical and financial expertise. The EBRD model managed just that, and although there are indeed considerable transaction costs in adopting such processes, the benefits they later bring, in lowering the risk on existing clients or in further developing the banks' relations with them (by offering cost-reducing services) pay-off in time.
  - The need for concerted deployment of a mix of instruments that address the global climate challenge, with energy efficiency lagging behind as an instrument scaled up to its potential. This is due to aforementioned specific barriers. The EBRD track record proves that with a streamlined business development focus across the organisation, energy efficiency financing can be scaled up considerably.

### Global environment benefits

98. The Project is designed to engage directly with a limited number of partner banks, with the wider demonstration effects to be picked up by the banking sector in time. As such, the global environment benefits of this Project are not direct, where *direct* GHG emission reductions are defined by the GEF as those achieved by project investments such as technology demonstrations and discrete investments financed or leveraged *during* the project's supervised implementation period (from the project start to the project closure).<sup>18</sup>
99. In contrast, GHG emission reductions achieved as a result of market facilitation and development through project-supported capacity building, information gathering, and replication effects of demonstration activities are considered *indirect* GHG emission reductions. As the Project activities in Brazil, China and India seek to (i) build up the capacity of directly engaged banks to subsequently be able to finance energy efficiency opportunities in a more mainstreamed manner, and (ii) to catalyst the banking sector more widely to mainstream and deploy energy efficiency financing, the resulting emissions reductions are considered indirect. They are expressed as "estimated" due to the majority being expected to occur beyond the Project period.
100. The estimated global benefit has been computed on the basis of the results of EBRD's energy audit programmes and SEFFs, and conservative assumptions (see Annex F for a more detailed description). The following steps were taken to estimate indirect emission reductions:
- Partner banks are expected to start channelling new, more streamlined financing to energy efficiency projects after they will have enhanced their capacity following the MSP inputs. It is estimated that they may channel an additional USD 40 million over a period of two years, following their capacity enhancement.
  - Based on EBRD's experience with energy audits and SEFFs, this investment amount can lead to projects which help avoid emissions of approximately 75,000 tonnes of CO<sub>2</sub>-eq. annually.
  - Considering an average lifetime of projects of 10 years, this results in 0.75 million tonnes.
101. In parallel, similar capacity building, accompanied also by direct lending to banks, as part of the Egypt SEFF, has been estimated to lead to approximately 39,000 tonnes of CO<sub>2</sub>-eq. reductions annually. Over the same average project lifetime of 10 years this cumulates to 0.4 million tonnes.

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<sup>18</sup> <https://www.thegef.org/gef/sites/thegef.org/files/publication/GEF%20EE%20Methodology%20v1.0.pdf>



## A.6 Risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and measures that address these risks:

102. The following table summarizes the assessment of potential risks that could affect Project implementation. The potential impact of all risks on Project implementation will be reviewed during Project inception and on an on going basis.

Risk	Mitigation approach
Political risk (i.e., low government commitment to energy efficiency in industry)	This is a <i>low risk</i> . All three governments have made a significant policy and legislative commitment to energy efficiency over the past decade.
Market risks	This is a <i>medium risk</i> at the deployment stage of the project. During project preparation and the delivery of Output 1, the Project team will seek to understand the market context in the new countries. Requiring interested banks to define their scope of ambition and target for a mainstreaming pilot, via the action plans or strategies as under Output 2, will ensure that efforts will be directed at the market segments which the banks themselves know as most promising. Leveraging the local market intelligence of the partner banks is the crucial source of mitigation of market risks.
Technology risk	This is a <i>low risk</i> . The technologies to be used are all available and proven. The barriers to market entry lie elsewhere.
Financial risk	This is a <i>moderate risk</i> . The Project is aimed at offering assistance to banks in developing channels to deploy their own financing towards energy efficiency projects. As such, the implementation phase should not bear financial risks. However, the materialisation of results after the project implementation, in terms of the banks actually financing energy efficiency projects depends on their commitment of funding towards this business segment. It should be noted that: (i) the Project will only engage those banks interested to develop energy efficiency financing, with such ownership proven via the drafting of own strategies /action plans; and (ii) preliminary findings in the preparation phase are that banks in the three countries do not lack liquidity; although the commitment of funds towards energy efficiency projects does depend on the return from such investments – capacity building in scoping the right projects is therefore at the heart of the Project.
Climate risk	This is a <i>low risk</i> , as the Project targets capacity building work with banks. However with regards to the clients which banks will ultimately be more prepared to offer energy efficiency financing to, modernized facilities will be better able to withstand energy supply shortages, extreme weather, and lower-carbon production will make enterprises less vulnerable to the potential impacts of stricter government regulation and consumer preferences for lower-carbon products over time.
Implementation Risk	This is a <i>medium risk</i> . The current project will build on experience that EBRD has in its region of operation of engaging local financial institutions and building up their capacity to finance energy efficiency projects. However, differently from how the EBRD is able to work with SEFF partners, in the case of China, India and Brazil, the EBRD does not benefit from the lever of offering finance to these banks in order to obtain their closer cooperation and focus. Implementation risk will be mitigated by: (i) engaging those banks which show early interest, and (ii) maintaining close cooperation with them and with other in-country partners including key governmental bodies.

## A.7. Coordination with other relevant GEF financed initiatives

103. The Project will liaise and coordinate with other GEF-financed initiatives as considered appropriate to ensure synergies and cooperation. Coordination with the GEF-financed initiatives noted below will depend on the individual banking products developed by partner financial institutions.

104. Briefing and exchanging experiences with other GEF Agencies are seen as crucial for the sustainability of the Project's outcomes. Briefing and coordination will therefore be sought in the context of the knowledge network which will be gradually built up during Project implementation and will be ensured under Output 4 activities. Such efforts will especially target sharing of experiences related to the banking systems of the three countries and energy efficiency contexts.

## China

- *World Bank – GEF (GEF ID: 4947) Developing Market-based Energy Efficiency Program in China:* The objective of the project is to support development and implementation of China's priority energy efficiency programs, with a focus on improving energy savings measurement and verification system and developing market-based mechanisms. Where synergies may be possible, the EBRD Project and partner financial institutions may seek to coordinate with the World Bank Project in its endeavours to build capacity for market-based mechanisms.
- *World Bank – GEF (GEF ID: 4109) China Energy Efficiency Promotion in Industry:* The project objective is to strengthen the institutional capacity for both the management and technical aspects of energy use in key industrial sectors in China, thereby contributing to improvements in energy efficiency and the reduction of greenhouse gas emissions. As the World Bank Project is drawing to a close in 2016, where appropriate, the EBRD Project will seek to gain valuable information from lessons learned from the World Bank Project.
- *UNIDO - GEF (GEF ID: 4866) Promoting energy efficiency in industrial heat systems and high energy-consuming (HEC) equipment:* The project objective is to promote energy efficiency in high energy consuming special equipment through a comprehensive approach, developing and revising technical regulations, providing training to national experts and establish a national HEC Special Equipment Energy Efficiency Testing Centre. The EBRD Project will seek to coordinate with the marketing activities of the UNIDO Project in the promotion of energy efficiency equipment in industry. Partner Banks of the EBRD Project may also benefit from the guidelines for financial evaluation of industrial energy efficiency projects created under the UNIDO Project.

## India

- *UNIDO – GEF (GEF ID: 4893) Promoting Market Transformation for Energy Efficiency in Micro, Small and Medium Enterprises:* The project will serve a dual objective of (i) promoting energy efficiency by introducing the ISO energy management standard 50001 and integrating system optimization practices in industry; and (ii) strengthening existing technology centres' capacity to serve as incubators for pump technology. Where appropriate, the EBRD Project will aim to align the design of energy efficiency financing products with the ISO ISO energy management standard 50001 and integrating system optimization practices in industry promoted by the UNIDO Project.
- *World Bank – GEF (GEF ID: 4918) Partial Risk Sharing Facility for Energy Efficiency:* The project development objective is to assist India in achieving energy savings with mobilization of commercial finance and participation of ESCOs. The EBRD Project will seek to coordinate with the World Bank Project in order to avoid duplication and achieve a synergistic approach to energy efficiency financing in India. The World Bank Project will likely provide important lessons learned in energy efficiency financing to be considered in the design of banking products developed by partner financial institutions under the EBRD Project. Additionally, partner financial institutions may leverage the World Bank Projects efforts to scale up the operations of ESCOs.

## Brazil

- *UNDP – GEF (GEF ID: 2941) Market Transformation for Energy Efficiency in buildings:* The project objective is to influence, transform and develop the market for energy-efficient building operations in Brazil and move towards a less carbon-intensive and more sustainable energy consumption path in the country. Where appropriate the EBRD will seek to coordinate with the projects objective to increase access to EE services and commercial financing for public sector buildings through its with a Public Building Initiative (PBI).
- *UNEP – GEF (GEF ID: 4254) Mitigation Options of Greenhouse Gas (GHG) Emissions in Key Sectors in Brazil:* The project supports the Government of Brazil in its efforts to reduce GHG emissions. The Project's objective is to assist the Government of Brazil to strengthen its technical capacity in supporting the implementation of mitigation actions for greenhouse gas emissions in key economic sectors (industry, energy, transportation, household and services, LULUCF, waste management and other cross-sector alternatives) in Brazil. Where appropriate, the EBRD Project will aim to assist partner financial institutions to align energy efficiency financing products with the GHG mitigation options identified by the UNEP Project and prioritised by the Government of Brazil.

## **B. ADDITIONAL INFORMATION NOT ADDRESSED AT PIF STAGE:**

### **B.1 Describe how the stakeholders will be engaged in project implementation.**

105. The EBRD will consider the most effective and efficient ways of consulting and involving stakeholders that are responsive to local needs and consistent with the Project's objectives at the various stages of implementation.
106. Key stakeholders engaged during the project preparation stage so far include:
- Local banks in China and India;
  - The Brazilian National Development Bank (BNDES), Brazil, with whom the EBRD has signed an MOU to collaborate, amongst other things, on energy efficiency;
  - The China Banking Regulatory Commission CBRC;
  - The Institute of Industrial Productivity, an international non-profit organisation which partners with industry and governments to promote industrial energy use efficiency;
  - UNEP-Finance Initiative and a multilateral finance institution.

### **Coordination with key stakeholder groups and relevant initiatives**

107. The specialist partner organisation which will carry out activities outlined in Output 4 will further engage national stakeholders in India, China and Brazil. Also, the knowledge exchange platform to be developed as part of Output 4 is intended to be web-based and will act as an open resource for banks willing to develop energy efficiency financing business lines. It is intended that it will contain examples of template tools, process maps and best practice case studies to be used by other financing institutions, including those not engaged via the Project.
108. Regarding coordination with **GEF agencies**, the Project strategy is to engage and coordinate with GEF agencies in the three countries as needed as the GE2F2 programme develops. This approach is chosen to avoid duplication of partners' efforts while also efficiently disseminating expertise related to an EBRD-specific business model directly to banks. The aim is to build a knowledge network in communication with GEF agencies throughout the programme implementation phase, and the network will remain active after the MSP ends. Engagement towards this aim will be sought via EBRD-led activities under Outputs 1 and 3, but will be also be central to activities under Output 4. These will be led by the agency, consultancy or organisation which is envisaged to be competitively selected to implement Output 4.
109. The Project will aim to ensure adequate **public participation**, where relevant and consistent with the Project's aim to contribute to the enhancement of the financial sector capacity to identify and support energy efficiency opportunities. As such, while there seems to be very limited scope to directly engage CSOs or indigenous peoples, partner banks will be strongly encouraged to engage with CSOs, communities and professional associations when considering potential projects and their impact pursuant to the Project activities under Outputs 2 and 3. This is similar to how the EBRD requires partner banks under the SEFFs to apply high CSO engagement standards to projects financed under the SEFFs and specifically with EBRD funds. It will be sought to engage local CSOs in the design and delivery of Output 4 activities. In particular, it will be sought that potentially relevant CSO stakeholders are invited to participate in country-level events.. Also, the envisaged online knowledge platform will take heed of, and possibly link to, existing CSO networks, for instance local business associations or sustainability-oriented CSOs.
110. Regarding GE2F2 Project engagement in Brazil, as noted above the project will liaise with the GEF projects under implementation. The Project will also coordinate with the GEF Focal Point at the **IADB**, as part of the intention to gradually build a knowledge network with other GEF Agencies as the Project enters its implementation phase. Engaged financial institutions in Brazil will be encouraged to develop synergies with related ongoing IADB activities. To date in Brazil the EBRD has engaged preliminarily with Brazil's BNDES to understand the potential to cooperate on energy efficiency financing efforts. Similarly, the EBRD will seek to engage the IADB to further understand banking sector energy efficiency activities in the country.
111. Coordination with **SE4All** programmes such as the **SE4All Accelerators** will be encouraged where possible for the purpose of speeding up additional project origination. The Accelerator programmes are considered valuable sources of new projects in as much as they will match the commercial profile sought for support by banks. Partner

banks will be recommended to pursue opportunities identified as part of the SE4All Accelerator programmes in the respective countries and assess them for financing.

## **Implementation arrangements**

### ***Project Leaders***

112. The project will be coordinated by the head office of EBRD in London. Project oversight will be under the responsibility of Project Management Team housed within the EBRD Energy Efficiency and Climate Change (E2C2) team.

113. Responsibilities of the Project Leaders include the day-to-day management of the operations of the Project, monitoring of the Project process, development of reporting to GEF on the project progress, to be the first point of contact for external communications regarding the Project, engaging in external marketing of the GE2F2, internal coordination related to the Project, including management of the internal approval process of individual call-offs, as well as management of the consultants and their work including leading the procurement of consultants (with support of Project Team). The Project Leaders will liaise with the GE2F2 pilot banks.

### ***Project Team***

114. The Project Team will be based at EBRD Headquarters. The Project Team will be composed of experts with a track record of supporting and implementing SEFFs in the EBRD's Region of Operations, including experts on sustainable energy financing tools. The Project Team may also engage with, and draw on, other EBRD units if the need arises, such as: Communication, Technical Cooperation, Environmental and Social Compliance, Office of the Chief Economist, Legal Counsels, Banking departments.

115. Among the responsibilities of the Project Team are the provision of input into the ToRs for the work of consultants; participation in consultant selection; review of the factual content and quality of outputs provided by consultants; assistance to consultants with identifying key stakeholders; participation in key meetings in China, India and Brazil, and other relevant awareness and knowledge exchange meetings; and ensuring that the undertaken activities are in line with Agency procedures in the area of their expertise and responsibilities (e.g. compliance with environmental strategies, policy dialogue strategies, etc.).

### ***Knowledge Management and Awareness Delivery***

116. The Project's knowledge management and awareness activities will be implemented through a specialist consultancy or a consortium of consortia of consultants (the "partner organisation"). Some of the details of the anticipated activities are provided below. This list is not exclusive or exhaustive. The partner organisation is expected to meet the following criteria:

- Relevant expertise in both communications and marketing, knowledge management and awareness and network creation in the subject area of energy efficiency financing; and
- Established links internationally in relevant sectors with potential stakeholders.

### ***Expert Roster***

117. The expert roster will be selected based on competitive tender, with the relevant Terms of Reference specifying requirements. The experts from the roster will be called-off to assist GE2F2 partner banks in China, India and Brazil to develop and to implement their energy efficiency action plans via short-term technical assistance assignments targeting identified skill gaps.

**TABLE 2. LEADS BY OUTPUT**

<b>Outputs</b>	<b>Lead</b>
Output 1 - Supplemental market studies and engagement workshops for China, India and Brazil	EBRD
Output 2 - Banking strategy and action planning	EBRD

Output 3 - Targeted technical assistance deployed for capacity building and banking product development with GE2F2 partner banks	EBRD
Output 4 - GE2F2 knowledge exchange and dissemination	International consultancy (“partner organisation”)

**B.2 Describe the socioeconomic benefits to be delivered by the Project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits (GEF Trust Fund/NPIF) or adaptation benefits (LDCF/SCCF):**

*Socioeconomic benefits*

118. Key socioeconomic and global environmental benefits that will result from the Project are related to the impacts of increased availability of finance for energy efficiency investments. In China, India and Brazil specifically, as a result of the increased availability and use of energy efficiency financing products, GHG emissions will be reduced and some of the following anticipated socioeconomic benefits will be enhanced:

- Resource savings, efficiency gains and cost savings in the case of industrial energy efficiency contributing to increased competitiveness of national and local industries;
- Improved indoor environmental conditions and health and cost savings in the case of buildings energy efficiency;
- Development of local capacity and creation of an enabling environment for energy efficiency technologies;
- Improved job retention and job creation as industries thrive from energy efficiency improvements.

*Gender dimensions*

119. In January 2010 the Board of Directors the EBRD adopted the Gender Action Plan (GAP)<sup>19</sup>, based on the EBRD’s commitment to the 3rd Millennium Development Goal (to end poverty by promoting gender equality) and the Gender Working Group, based on the EBRD’s internal policy this will promote gender equality of opportunities across its full range of investment and donor-funded activities. Gender equality is considered not only an integral part of sound business management but also key in the EBRD’s activities to advance sustainable growth in its countries of operations. Likewise, the EBRD will ensure, where necessary, that GE2F2 partner banks directly engaged via the Project are advised to include gender equality and gender mainstreaming in GE2F2-related activities.

120. There are several specific Project activities that explicitly address gender:

- Output 2: GE2F2 partner banks will be advised to consider gender dimensions when developing energy efficiency financing action plans.
- Output 3: When screening experts for the technical expert roster equal opportunities for women will be ensured. Capacity building and training strategy materials will be prepared to reflect and address possible gender gaps which may have been identified as part of activities under Output 2. Gender may also be reflected in banking product development /rollout, should energy use opportunities for women easily be improvable via energy efficiency financing activities.
- Output 4: The creation and operation of the knowledge platform and knowledge exchange tools, as well as the organisation of possible stakeholder engagement events will give consideration to gender.
- Monitoring: Results tracked through the regular monitoring activities of the Project will be gender disaggregated where a relevant gender dimension has been identified and considered.

**B.3. Explain how cost-effectiveness is reflected in the project design:**

121. The Project involves GEF funding of USD 1.9 million. While the project will not achieve direct emissions reductions, significant indirect emissions will be leveraged as described in section A.5 above and in detail in Annex

<sup>19</sup> The EBRD’s Gender Action Plan. Available from: <http://www.ebrd.com/downloads/sector/gender/genplan.pdf>.

F. Namely, investments are expected following the development of energy efficiency financing products and deployment channels by banks engaged via the GE2F2. Indirect emission reductions are estimated at 3 million tonnes of CO<sub>2</sub>eq for projects financed by GE2F2 partner banks in the two years following capacity development via the MSP work. For investments by the GE2F2 partner banks (i.e. not funded by the GEF project) of USD 40 million, the cost per tonne of indirect emissions reductions would be approximately USD 27 per tonne of CO<sub>2</sub>eq. For the capacity development supported by the GEF, the cost per tonne of indirect emissions reduction is USD 0.63 per tonne of CO<sub>2</sub>eq reduced. The methodology for estimating these reductions is provided in Annex F.

### **C. DESCRIBE THE BUDGETED M &E PLAN:**

122. The Monitoring and Evaluation Plan used by the GE2F2 Project supports the planning and adaptive management requirements of the Project, meets the requirements of both the EBRD and the GEF, and facilitates reporting of progress and impacts to the GEF Secretariat. The EBRD uses a Results Based Management approach, based on the Project Results Framework (Annex A). The EBRD will follow its normal practices of monitoring, reporting and evaluation.
123. The Monitoring and Evaluation framework will be used to assess the Project's impact of mainstreaming energy efficiency financing and the development of energy efficiency financing products at partner banks. The Project Results Framework, which includes performance indicators, targets and timelines, is the foundation of the Monitoring and Evaluation framework. The performance indicators will be monitored at regular intervals throughout the Project's implementation period.

#### ***Final evaluation***

124. The Project's final evaluation will be carried out by an independent party at the appropriate time and have two basic objectives:
- i. To assess the results and impacts, both intended and otherwise, of the Project (accountability function); and,
  - ii. To determine whether there are lessons to be learned from past experience to make future operations better, thereby contributing to 'institutional memory' (lessons learned or quality management orientation).

#### ***Monitoring and evaluation budget***

125. The monitoring and reporting activities will be financed by in-kind co-financing and agency fees. Other costs associated with data collection will be included in the staff costs for team members in the day-to-day execution of their tasks and will not be tracked separately. External evaluation is budgeted at USD 50,000 for contracting external evaluation contractors. Refer to Annex E of this document for a breakdown of indicative monitoring and evaluation plan.
126. The entire Project will be monitored, and inputs from participating GE2F2 partner banks and stakeholders in the Project will be requested so as to enable the collection of data on energy savings and other benefits achieved. As previously noted, it will be up to each bank to setup and use the tools for recording new energy efficiency business volume and standardised estimations of ex-ante physical impacts following the EBRD-managed advisory assignment (Output 3). The expectation is that some banks that EBRD will engage closely with will adapt simple reporting systems about their pipeline and projects, which should be centralised at initiative-level. This in turn could be used towards updating MSP level expectations on GHG benefits and mobilised co-financing.
127. The Project Leader will be responsible for preparing regular progress reports summarizing the overall progress of GE2F2 engagements.

**PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)**

- A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT(S) ON BEHALF OF THE GOVERNMENT(S):** (Please attach the [Operational Focal Point endorsement letter\(s\)](#) with this form. For SGP, use this [OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)

**B. GEF AGENCY(IES) CERTIFICATION**

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for CEO endorsement/approval of project.

Agency Coordinator, Agency Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Marta Simonetti		11/16/2015	Andreas Biermann and Ian Smith	442073387358 and +442073387021	biermana@ebrd.com  smithi@ebrd.com

**ANNEX A: PROJECT RESULTS FRAMEWORK** (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

Project Strategy	Objectively Verifiable Indicators	Baseline (Start of Project in 2015)	Target (End of project)	Sources of Verification
<b>Impact</b>				
<p><i>Project objective:</i> To develop energy efficiency financing strategies and deployment mechanisms for banks, with focus on China, India and Brazil.</p>	<p>Strategy documents or strategy document outlines developed by GE2F2 partner banks</p> <p>Banking products or financing deployment mechanisms developed /enhanced by partner financial institutions for energy efficiency financing</p> <p>Estimated indirect tons of avoided GHG emissions, as can be inferred from the banking products and financing mechanisms developed with partner financial institutions</p> <p>Estimated or expected volume of investment mobilized through banking products or financing deployment mechanisms developed with partner financial institutions</p>	<p>0 – all GHG emissions reductions will be incremental, although indirect</p> <p>0 – all funding will be incremental from the onset of GE2F2 activities, although much of it may material</p> <p>0 – all funding will be incremental from the onset of GE2F2 activities, although much of it may materialise after banks enhance their energy efficiency financing capacity</p> <p>No specific strategy documents, banking products and /or deployment channels developed or enhanced by GE2F2 partner banks for energy efficiency financing</p>	<p>An estimated 75,000 tonnes of annual CO<sub>2</sub>eq emission reductions are expected from projects supported over a period of two years (indirect emission reductions)</p> <p>USD 40 million of commercial financing for energy efficiency to be estimated to be mobilised as a result of GE2F2 activities over a period of two years</p> <p>Strategies, banking products and/or financing deployment mechanisms used by GE2F2 partner banks for energy efficiency financing</p>	<p>Project reports including:</p> <ul style="list-style-type: none"> <li>• Annual Project progress reports; these will seek to reference any indirect GHG emission reduction estimates and mobilised financing estimates if such information is relevant and appropriate for the activities conducted in the reporting period;</li> <li>• Various output documents which support the cooperation activities conducted with GE2F2 partner banks and with the “partner organisation” (for Output 4), as per the nature of the engagement with each of these.</li> </ul> <p>The EBRD team expects different depths of engagement between the three countries and between partner banks as well as different levels of confidentiality between banks in sharing data.</p>



<b>Outputs</b>	<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	<b>Assumptions</b>
Output 1 – Supplemental market studies and engagement workshops for China, India and Brazil completed	Reports from engagement missions in, and market context reviews of China, India and Brazil	Back-to-office reports and/or market context snapshots for at least two of the three countries	Initial engagement missions would lead to front-running banks expressing interest in participating in the GE2F2 as partner banks. At initial engagement, it may be however not opportune to request official confirmation agreements but instead the back-to-office reports will be used as evidence of interest gathered and market understanding obtained.
Output 2 – Banking strategy and action planning developed	GE2F2 partner banks' strategies and action plans are developed	Non-commercially sensitive summaries of GE2F2 partner banks' strategies /action plan documents or summaries of engagements (should such information not be available to be shared, relevant communication items will be considered as sources of verification)	Local partner banks need to describe /develop their strategies to mainstream energy efficiency financing, to build up or to deploy their internal energy efficiency financing teams and products. It is expected that some banks will do so in more detail than others, and that some may not be able to share these with the EBRD if they refer to commercially sensitive issues, in which case summaries will be requested.

Outputs	Objectively Verifiable Indicators	Sources of Verification	Assumptions
Output 3 – Targeted technical assistance deployed for energy efficiency financing capacity building with GE2F2 partner banks	<ul style="list-style-type: none"> <li>• Roster of technical experts is available</li> <li>• Number of GE2F2 partner banks benefiting from GE2F2 assistance</li> </ul> <p>Depending on the technical assistance deployed for each GE2F2 partner bank, some of the following:</p> <ul style="list-style-type: none"> <li>• Procedures and protocols related to energy efficiency financing are established</li> <li>• Capacity building and training strategy and materials are available</li> <li>• Capacity building and marketing strategy and/or materials are developed.</li> <li>• Number of GE2F2 partner bank staff trained</li> </ul>	<ul style="list-style-type: none"> <li>• Technical experts roster information based on EBRD’s procurement process</li> <li>• Annual project monitoring reports</li> </ul> <p>Depending on the technical assistance deployed for each GE2F2 partner bank, some of the following:</p> <ul style="list-style-type: none"> <li>• Capacity building and training strategy and materials, or non-commercially sensitive summaries of these;</li> <li>• Capacity building and marketing strategy and materials, or non-commercially sensitive summaries of these;</li> <li>• Various pieces of outputs from the technical assistance assignments called-off from the roster of expertise;</li> <li>• Various pieces of documentation referring to investments carried out by GE2F2 partner banks subsequently to MSP activities.</li> </ul>	<p>Technical experts are necessary and available to be assigned on targeted technical assistance missions to fill capacity gaps in developing energy efficiency financing strategies, banking products and/or deployment channels.</p> <p>The specifics of such individual assignments depend on the capacity needs signaled by each GE2F2 partner bank.</p>
Output 4 – GE2F2 knowledge exchange and dissemination established	<p>Depending on the knowledge dissemination necessities, some of the following:</p> <ul style="list-style-type: none"> <li>• Project website established</li> <li>• Case studies available and lessons learnt available for future GE2F2 partner banks</li> </ul>	<p>Depending on the knowledge dissemination necessities, some of the following:</p> <ul style="list-style-type: none"> <li>• Project website</li> <li>• Monitoring reports documenting, as relevant /necessary, lessons learnt and case studies.</li> </ul>	<p>A “partner organisation” is procured to streamline activities under Output 4</p>

**ANNEX B: RESPONSES TO PROJECT REVIEWS** (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

Secretariat Comment at PIF	GEF Agency Response
<p>a) We expect to see careful analysis of how the proposed EBRD approach will build on lessons learned from existing projects</p>	<p>The essence of the Project is that of transferring the expertise of energy efficiency financing developed by the EBRD in the past decade. The details of the EBRD financing model and lessons learnt are included as part of the Project baseline in the relevant section of the current document. However, at the core of the EBRD experience there are:</p> <ul style="list-style-type: none"> <li>• The SEFF track-record of assisting over 100 financial institutions to develop their energy efficiency financing capacities; as in the case of other IFIs this was done via credit lines; however, differently, credit lines were accompanied by targeted technical assistance to build up the capacity of the banks to integrate in their operations ways of identifying, assessing and financing energy efficiency projects, via products that worked best for each.</li> <li>• The experience of deploying in a streamlined manner investment-focused energy audits or assessments of clients with high energy efficiency potential and who are already interested in bank financing; the technical transaction cost of scoping energy efficiency projects is thus minimised by using energy audits as a deal origination or investment enhancing tool.</li> </ul> <p>The Project follows a similar bottom up approach of the EBRD experience and SEFF model, for establishing durable internal structures necessary to mainstream and scale up energy efficiency financing. The structure of the outputs of the Project has been formulated in a flexible manner to reflect the EBRD experience of working with different banks, with each having a different internal corporate structure, client focus and being at different stages of development of their energy efficiency financing capacities.</p> <p>First, encouraging and assisting banks to develop their own strategies or energy efficiency financing action plan, or similar, ensures direct applicability of the strategy to the actual working circumstances of each bank and ownership of the strategy and its defined effort.</p> <p>Second, it is intended that short-term technical assistance, called-off from a roster of experts supervised by the EBRD, is then deployed to complement the development and implementation capacity gaps identified at each GE2F2 partner bank.</p>
<p>b) Confirm if any selected project will be funded if financing becomes available from other partners</p>	<p>Financing of energy efficiency projects will be extended by the banks in Brazil, China and India, once they will have developed their capacity to identify and support energy efficiency projects, following inputs from the MSP. In addition they will be encouraged to link with other sources of technical assistance, or financing, including other GEF Agencies to supplement their internal project origination resources.</p> <p>In parallel, the EBRD is working on disseminating its SEFF model directly in Egypt by providing financing to the banking system there, together with technical assistance for on-lending to energy efficiency projects.</p>

Secretariat Comment at PIF	GEF Agency Response
<p>c) Refine the GHG emissions reduction estimates based on the ability of this project to either fund specific projects, or facilitate acceleration of projects that would otherwise be delayed</p>	<p>As per the outline of baseline developments, the current Project aims to accelerate the development of early energy efficiency financing markets, by building up the capacity of banks to identify, appraise and finance energy efficiency projects. As per the details in the section on the expected global environmental benefit, resulting GHG emission reductions are therefore indirect, expected after banks are assisted in building up their capacity.</p> <p>There is of course the potential for projects to be financed by the GE2F2 partner banks during the timeline of the MSP, however only indirect GHG emission reductions have been included in the current assessment in order to be more conservative.</p> <p>Indirect emission reductions have been expressed based on the EBRD experience of its energy audit programmes and SEFFs, because of the expectation that banks will develop similar tools to scope projects. Details of the GHG emission reductions estimation are presented in Annex F.</p>
<p>d) Confirm GEF agencies and other IFIs as full partners in the project, with higher co-financing as conditions for second-stage CEO approval</p>	<p>With the change in structure of the MSP from a precursor to a global financing facility as initially presented, to a technical assistance-only knowledge sharing initiative, it was considered that involvement of another regional IFI at the onset of the Project would not be prerequisite. Instead a knowledge network will be gradually developed throughout the Project implementation phase to facilitate links between the partner banks directly engaged to share elements of EBRD's model, with local GEF agencies and other important stakeholders.</p> <p>Regarding the showcasing element of the MSP, following the fact that a GEF Agency which was approached for this role could not undertake the duties of a full partner in the Project, it has been proposed that a suitable knowledge management and dissemination partner should be a competitively selected specialist organization or consultancy, with a global remit and network. This partner and the EBRD will engage with GEF Agencies as part of the knowledge network to ensure coordination and encourage cooperation between the banks engaged and the IFI community.</p> <p>Regarding co-financing, the EBRD is proposing as a main stream of co-financing the Egypt SEFF, developed at the same time as this MSP and which similarly aims to share the SEFF model within a large, emerging economy with an important role in the global climate challenge. Unlike Brazil, China and India however, Egypt has recently become a country of operations for the EBRD hence the Bank could make available to date USD 30 million to the country's banking system. Together with the initial figure presented, the current proposal therefore brings together USD 32 million of EBRD co-financing.</p>

**ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS<sup>20</sup>**

A. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES FINANCING STATUS IN THE TABLE BELOW:

PPG Grant Approved at PIF: <b>100,000</b>			
<i><b>Project Preparation Activities Implemented</b></i>	<i><b>GEF/LDCF/SCCF/NPIF Amount (\$)</b></i>		
	<i><b>Budgeted Amount</b></i>	<i><b>Amount Spent To date*</b></i>	<i><b>Amount Committed</b></i>
<i>Initial on-site engagement support and market snapshots for China and India</i>	96,000	50,000	96,000
<b>Total</b>	96,000	50,000	96,000

\*of this, USD 28,000 has been paid, and USD 22,000 has been invoiced by the consultants assigned under the PPG, to the EBRD, for work carried out to date. The balance to USD 96,000 is not associated with work already undertaken.

<sup>20</sup> If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue undertake the activities up to one year of project start. No later than one year from start of project implementation, Agencies should report this table to the GEF Secretariat on the completion of PPG activities and the amount spent for the activities.

**ANNEX D: CALENDAR OF EXPECTED REFLOWS** (if non-grant instrument is used)

Provide a calendar of expected reflows to the GEF/LDCF/SCCF/NPIF Trust Fund or to your Agency (and/or revolving fund that will be set up)

N/A

## ANNEX E: INDICATIVE MONITORING AND EVALUATION PLAN

Type of Monitoring and Evaluation activity	Responsible Parties	Budget USD <sup>*21</sup>	Time frame
Annual Project Report and Project Implementation Report	-Project coordination and management -EBRD staff and support	15,000	Annual
Terminal Evaluation and Report	-EBRD -External evaluation consultants	50,000	At the end of Project implementation
Visits to field sites as necessary (EBRD staff travel costs are not covered by GEF Project budgets)	-EBRD staff and support	20,000	Yearly
<b>TOTAL COST</b>		<b>85,000</b>	

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<sup>21</sup> \* GEF funding is **not** requested for Project Management. These costs are not to be funded by the Project grant funding, but by co-financing and agency fees.

## **ANNEX F: GREENHOUSE GAS EMISSION REDUCTIONS ESTIMATES**

### ***Indirect nature of emission reductions***

The objective of the Project is to develop and showcase strategies and deployment mechanisms to scale up energy efficiency financing capacity within partner banks in China, India and Brazil, as part of the Global Energy Efficiency Financing Framework (GE2F2) knowledge sharing initiative. The Project is designed to engage directly and on a limited, short-term basis, with a limited number of partner banks in these three large emerging economies, with the wider demonstration effects to be picked up by the banking sector in time.

It is unlike conventional GEF projects in that it builds capacity for energy efficiency financing without focusing from the onset on specific technologies, sectors or projects, and without providing investment financing directly.

As such, the global environment benefits of this Project are not direct, where direct GHG emission reductions are defined by the GEF as those achieved by project investments such as technology demonstrations and discrete investments financed or leveraged during the project's supervised implementation period (from project start to closure). In contrast, GHG emission reductions achieved as a result of market facilitation and development through project-supported capacity building, information gathering, and replication effects of demonstration activities, are considered indirect GHG emission reductions.

As this Project seeks to (i) build up the capacity of directly engaged banks to subsequently become able to finance energy efficiency opportunities in a more mainstreamed manner, and (ii) to catalyze the banking sector more widely to mainstream and deploy energy efficiency financing, the resulting emissions reductions are considered indirect. They are expected to be achieved in time after the interested banks develop energy efficiency business lines following the GE2F2 capacity building inputs.

In parallel to the knowledge sharing effort directly supported by the MSP grant, the EBRD continues to share directly its SEFF model in its newer countries of operations. The rolling out of a SEFF in Egypt is aligned to the wider aim of the MSP to share the SEFF model in large emerging economies with a considerable role in addressing the global climate change challenge. For this reason, emission reductions resulting from projects financed via banks in Egypt, pursuant to SEFF support, are also considered as MSP indirect global benefits.

### ***Business-as-usual estimation***

For many GEF-funded projects, the technologies to be used are clearly defined up-front, therefore it is feasible to define the potential market and the business-as-usual trajectory of emissions growth/reductions. However, investments made as a result of this Project will be in a mix of technologies and industries that has not been predetermined and will be demand-led.

As described in the project baseline, without this GEF project, the baseline scenario will involve a gradual increase in energy efficiency globally including in China, India and Brazil. However, the type of investments made as a result of this Project depend on the existence of links between industrial energy audits schemes or other project identification tools or initiatives, and banks' financing. Currently, such links have not been understood as of significant strength and it is considered they are unlikely to develop in the absence of this Project. As a result, investments of this type are considered to be additional. For these reasons, the estimate of the business-as-usual emissions reductions is set at zero.

### ***GHG reductions due to energy efficiency measures***

Some of the technical assistance modules under Output 3 focus on sharing different tools or ways to identify energy efficiency financing opportunities. The ones that EBRD developed successfully, internally and with its SEFF partner banks, are the energy audits and the lending based on standardized lists of technologies. Adoption of either of these or of other similar origination tools by the GE2F2 partner banks will depend on their preference and on the availability and willingness to dedicate internal resources. Also, some banks are expected to do so faster than others.

Therefore, given this uncertainty, an estimate of the MSP indirect emission reductions has been computed using the results of EBRD's energy audit programmes and of the SEFFs to date. The relevant inputs to the computation are presented in the table below.



A time horizon of two years' worth of support for projects by partner banks, after they will have enhanced their capacity, is taken into consideration. It is assumed that during these first two years of banks using the origination tools developed with MSP support, the banks will channel some USD 40 million to energy efficiency projects. Based on the results of the EBRD energy audit and SEFF programmes, this investment amount can lead to estimated CO<sub>2</sub> emission reductions of approximately 75,000 tonnes annually, or 0.75 million tonnes over an average project lifetime of 10 years.

It should be noted that all inputs to this calculation have been taken at conservative values. Partner banks will likely continue to use their enhanced energy efficiency financing capacity for a longer time than the two years, although, to remain conservative, the financing to be likely mobilized only over a 2 year period was considered towards the global environmental benefit estimation.

Assumed annual mobilized amount by the GE2F2 partner banks, after the enhancement of their energy efficiency financing capacity	US\$ 20 million	Based on the assumptions: at least 20 energy audits or similar origination activities being conducted annually; only 50% of these will result in additional investments of an average value of USD 2 million each. However, these figures may be highly variable, as they depend on each bank's choice of business tools or products, client base, dedicated internal resources, etc.
Number of years of financing activities taken into consideration, during which GE2F2 banks deploy their origination tools developed via the MSP	2 years	Considered conservative, as it is expected that banks will make use of their enhanced energy efficiency financing capacity for a larger number of years following the MSP.
The average carbon emission reduction yield per unit of investment for SEFFs and energy audit investment programmes	1.38 kgCO <sub>2</sub> /US\$, year	Indicator based on EBRD experience; equal to annual emission reductions per total investment values mobilized for projects linked to the energy audit programmes and the SEFFs. Projects considered are in the industrial, commercial buildings and agribusiness sectors.
Adjustment factor for carbon emission reduction yield, to reflect higher carbon intensity of Brazil, China and India	1.375 times	The ratio between the carbon emissions intensity of GDP of Brazil, China and India (taken together) and the countries with SEFFs and with investments linked to energy audit programmes. Based on data from IEA, with carbon emissions based on energy use and GDP expressed at market exchange rates.
Lifetime of projects	10 years	This is an average between the lifetimes of energy efficiency investments EBRD considers for a variety of sectors.

Additionally to the emission reductions estimated for the partner banks in Brazil, China and India, the annual emission reductions expected from projects which will be supported via the Egypt SEFF, have been estimated at 39,000 tonnes of CO<sub>2</sub>. This is based on previous EBRD SEFF experience and analysis of energy efficiency potential in Egypt. Considering the same average project lifetime of 10 years, the global environmental benefit is of approximately another 0.4 million tonnes CO<sub>2</sub>.

### ***Replication effects***

While estimating the market potentials is not feasible for a top-down indirect emissions reduction estimate because the Project interventions involve a wide variety of technologies and several countries, a bottom up estimate has been made. Using a conservative replication factor of at least 1, the additional indirect emissions reductions would be of 1.15 million tonnes CO<sub>2</sub>eq. Hence total indirect emission reductions are estimated to be 2.3 million tonnes CO<sub>2</sub>eq. Replication effects are likely to be much larger.


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Agency Coordinator, Agency Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
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