

# Accelerating adoption of super-efficient technologies for sustainable thermal comfort in buildings in India

**Review PIF and Make a recommendation**

## Basic project information

**GEF ID**

10370

**Countries**

India

**Project Name**

Accelerating adoption of super-efficient technologies for sustainable thermal comfort in buildings in India

**Agencies**

UNDP

**Date received by PM**

10/10/2019

**Review completed by PM**

4/10/2020

**Program Manager**

Aloke Barnwal

**Focal Area**

Climate Change

**Project Type**

FSP

## PIF

### Part I – Project Information

#### Focal area elements

1. Is the project/program aligned with the relevant GEF focal area elements in Table A, as defined by the GEF 7 Programming Directions?

#### Secretariat Comment at PIF/Work Program Inclusion

Yes, the project is aligned with GEF's climate change focal area and will directly contribute to accelerating energy efficiency adoption in India focusing on buildings. The program has well balanced focus on strengthening policy and regulatory environment, market acceleration of super efficient technologies using innovative business models and capacity building.

The project title refers to climate resilient cities. However, the primary focus is on low carbon and energy efficiency technologies. We acknowledge the co-benefit of reduced heat island effect in built environment, but given that this is not a primary target and also the Rio Marker is for mitigation only, we suggest to remove reference of climate resilient cities in the project title. You may elaborate the resilience benefit in the results section of the PIF.

March 20, 2020: The revised project title is fine. However, "and applications" is not necessary as "adoption" implies application.

April 1: No additional comments

### **Agency Response**

Title has been changed to “Accelerating adoption of super-efficient technologies and applications for sustainable thermal comfort in buildings in India”

Response to comment March 20, 2020

Title has been changed to “Accelerating adoption of super-efficient technologies for sustainable thermal comfort in buildings in India”.

### **Indicative project/program description summary**

**2. Are the components in Table B and as described in the PIF sound, appropriate, and sufficiently clear to achieve the project/program objectives and the core indicators?**

### **Secretariat Comment at PIF/Work Program Inclusion**

The three components seem to be sound and complementary to achieve the program objectives.

Under component 1, there is limited focus on supporting development of policies and regulations that will drive market acceleration and private sector engagement for adoption of energy efficient building design standards and super efficient energy efficient cooling technologies. So, the key question here is that are new supportive policies and regulations needed to ensure adoption of these codes and guidelines? If not, please elaborate existing policies and regulations. If not, the project may like to include this as one of the activities.

Under component 2: While the component and its outcomes are clear and well linked with the objectives, the agency is requested to highlight how the project will adopt the energy efficiency accelerator approach of GEF 7 which aims to bring together diverse sub-sectors. Please refer to GEF 7 strategy below in this regard:

**The accelerators share common approaches across diverse sub-sectors, including Buildings, District Heating and Cooling, Energy Management for Industry, Equipment and Appliances. The accelerators promote global best practices, foster harmonization of testing and performance standards, and provide technical assistance to countries needing targeted engagement. (Page 39- GEF 7 programming directions)**

**March 20, 2020:**

1. Thanks for clarifying that the focus of the project is on ensuring harmonization across different policies for effective implementation of thermal comfort building standards and application of technologies.
2. Response to second point is fine. The GEFSEC will look forward to additional details related to this at the CEO Endorsement Request stage.

April 1, 2020

No additional comments.

## **Agency Response**

### **Comment:**

*The three components seem to be sound and complementary to achieve the program objectives.*

*Under component 1, there is limited focus on supporting development of policies and regulations that will drive market acceleration and private sector engagement for adoption of energy efficient building design standards and super efficient energy efficient cooling technologies. So, the key question here is that are new supportive policies and regulations needed to ensure adoption of these codes and guidelines? If not, please elaborate existing policies and regulations. If not, the project may like to include this as one of the activities.*

### **Response:**

- As the project is not suggesting the delivery of a new policy, and instead, propose an effective harmonization among them for effective implementation, accordingly, the project would stocktake at the time of PPG or include as an activity as suggested.

### **Comment:**

*Under component 2: While the component and its outcomes are clear and well linked with the objectives, the agency is requested to highlight how the project will adopt the energy efficiency accelerator approach of GEF 7 which aims to bring together diverse sub-sectors. Please refer to GEF 7 strategy below in this regard: **The accelerators share common approaches across diverse sub-sectors, including Buildings, District Heating and Cooling, Energy Management for Industry, Equipment and Appliances. The accelerators promote global best practices, foster harmonization of testing and performance standards, and provide technical assistance to countries needing targeted engagement. (Page 39- GEF 7 programming directions)***

**Response:**

Yes. The project will align with the accelerators of SE4ALL as well as Global Cooling Prize. Further analysis will be done during the PPG phase to identify specific accelerator platforms and entry points for linkages.

Response to comment March 20, 2020

Noted

**Co-financing**

**3. Are the indicative expected amounts, sources and types of co-financing adequately documented and consistent with the requirements of the Co-Financing Policy and Guidelines, with a description on how the breakdown of co-financing was identified and meets the definition of investment mobilized?**

**Secretariat Comment at PIF/Work Program Inclusion**

The co-financing is adequately documented and appropriately classified. The agency is requested to elaborate on two co-financing sources

1. Multilateral Fund (MLF), Ministry of Environment, Forests and Climate Change \$10 million
2. SBI – KfW line of Credit \$100 million

Since these are significant co-finance, the agency is requested to elaborate their link with the proposed project in the explanation below Table C or in baseline. What fraction of the fundings will be applicable to this project? What is the added value of the project?

March 20, 2020

Thanks for providing the details. Few additional comments below:

- Please provide more realistic estimate at PIF stage if it's anticipated that the amount will come down (as mentioned in the PIF).

- Please provide a rationale for using \$100 million out of \$250 million kfw credit line as co-finance. Is this amount expected to flow in the target regions? Also, does this \$100 million include the \$10 million grant mentioned in the description? If not, why is this \$10 million grant not included as co-finance?
- The first co-finance is tagged as grant from BEE. However, the description implies that it's a recurrent expenditure allocated to BEE by GOI. Please merge the first two co-finance into one.
- The two co-finance by municipalities are not clear. The foot note says covered under BEE. Does it imply that the source of fund is BEE for municipalities. If yes, then the source and nature of funding needs to be revised. Also, it is not clear why two separate co-finances were proposed. Are these two different municipalities?
- Please do not mention a co-finance if it is not estimated at this stage i.e. the EESL co-finance. It is expected that EESL will co-finance some interventions which the Agency may like to add at the CEO ER stage.
- Finally, please elaborate " GEF project complements with TA to this component of USD 1 million for aligning its pilots for investments financed through these mechanisms and thus creates accelerated and additional project pipeline.". Does it imply that GEF financing of \$1 million complements the two co-funding? Or does it imply that only \$1 million of the two funds complements with GEF financing? Please clarify.

April 1, 2020: Thanks for the clarifications. Please confirm if BEE co-finance of \$9 million is grant investment mobilized or in-kind recurrent expenditure or grant recurrent expenditure. The co-finance table mentions municipalities co-financing twice. Are these two different municipalities? If not, why can't it be combined under one?

April 10, 2020: No additional comments.

## Agency Response

### Comment:

*The co-financing is adequately documented and appropriately classified. The agency is requested to elaborate on two co-financing sources*

*1. Multilateral Fund (MLF), Ministry of Environment, Forests and Climate Change \$10 million*

*2. SBI – KfW line of Credit \$100 million*

*Since these are significant co-finance, the agency is requested to elaborate their link with the proposed project in the explanation below Table C or in baseline. What fraction of the fundings will be applicable to this project? What is the added value of the project?*

### Response:

The two co-financing sources have been elaborated. These constitute about 20 - 40% of the funding available. GEF project complements with TA to this component of USD 1 million for aligning its pilots for investments financed through these mechanisms and thus creates accelerated and additional project pipeline.

Response to comment March 20, 2020

As suggested, overall Co-financing estimates have been reviewed and revised conservatively.

On Cofinancing:

- Potential linkages to EESL has been taken out at this stage and will be assessed at the time of CEOER.
- BEE's existing schemes to Municipalities have been combined. It was initially proposed as two different municipalities. However, the source of funding is still targeted as municipalities as the scheme is likely to leverage their source of funding.
- For KfW line of credit, the estimates are based on the targeted project reach; further, the access to this cofinancing has been limited to the loan component as the grant component ~ 10 million is likely contingent upon higher efficiencies (higher than the minimum criteria set for loan eligibility) are achieved, which may be assessed during the PPG Phase. Usually, the grants linked to the development loans do not support generic TA and treated as accompanying measures for their effective disbursements of the loans.

Response to comment April 1, 2020

It is confirmed that BEE co-finance of 9 million is “grant investment mobilized”. This is being proposed as budgetary provisions of BEE for grant investment through schemes that are related to the project. Also, the co-financing from Municipalities has been combined as suggested but would target different municipalities.

**GEF Resource Availability**

**4. Is the proposed GEF financing in Table D (including the Agency fee) in line with GEF policies and guidelines? Are they within the resources available from (mark all that apply):**

### **Secretariat Comment at PIF/Work Program Inclusion**

Yes, the GEF financing is in line with GEF policies and financing guidelines.

March 20, 2020: Comment cleared.

### **Agency Response**

#### **Comment:**

*Yes, the GEF financing is in line with GEF policies and financing guidelines.*

#### **Response:**

As the STAR allocation for this project has now been reduced to USD 5 Million. However, the scope of the PIF remains same and the shortfall from the STAR allocation is compensated by enhanced contribution from BEE. The specific co-financing arrangements will be elaborated during the PPG phase.

**The STAR allocation?**

**Secretariat Comment at PIF/Work Program Inclusion**

The STAR amount proposed is within the allocated STAR for India.

**Agency Response**

The focal area allocation?

**Secretariat Comment at PIF/Work Program Inclusion**

CCM STAR is proposed for this project which aligns with the project objectives.

**Agency Response**

The LDCF under the principle of equitable access

**Secretariat Comment at PIF/Work Program Inclusion**

NA

**Agency Response**

The SCCF (Adaptation or Technology Transfer)?

**Secretariat Comment at PIF/Work Program Inclusion**

NA



**Agency Response**

Focal area set-aside?

**Secretariat Comment at PIF/Work Program Inclusion**

NA

**Agency Response**

Impact Program Incentive?

**Secretariat Comment at PIF/Work Program Inclusion**

NA

**Agency Response**

Project Preparation Grant

5. Is PPG requested in Table E within the allowable cap? Has an exception (e.g. for regional projects) been sufficiently substantiated? (not applicable to PFD)

**Secretariat Comment at PIF/Work Program Inclusion**

Yes

**Agency Response**

Core indicators

6. Are the identified core indicators in Table F calculated using the methodology included in the correspondent Guidelines? (GEF/C.54/11/Rev.01)

### **Secretariat Comment at PIF/Work Program Inclusion**

The 0.55 million tons of GHG emission reduction potential seems on the lower side given the catalytic nature of the project. We suggest to refer to GEF's guidance on emission estimation for assessing the GHG reduction benefits. It seems the estimation is done only based on pilot projects and not factoring in the catalytic policy, regulatory and standards development support provided to governments which may have a significant impact. [https://www.thegef.org/sites/default/files/publications/GEF\\_EE\\_Methodology\\_v1.0\\_2.pdf](https://www.thegef.org/sites/default/files/publications/GEF_EE_Methodology_v1.0_2.pdf)

Similarly, the number of beneficiaries (18,000) seems to be low. [http://www.thegef.org/sites/default/files/documents/Results\\_Guidelines.pdf](http://www.thegef.org/sites/default/files/documents/Results_Guidelines.pdf)

20 March, 2020

The GEF results framework requires GHG emission reduction reporting of direct and indirect only. Direct emission reduction may happen beyond the project period too. Therefore, the Agency can add the 0.7 and 3.34 million amounts and report 4.04 million ton as total direct emission reduction. The explanation of this break up is useful.

April 1: Thanks. No additional comments

### **Agency Response Comment;**

*The 0.55 million tons of GHG emission reduction potential seems on the lower side given the catalytic nature of the project. We suggest to refer to GEF's guidance on emission estimation for assessing the GHG reduction benefits. It seems the estimation is done only based on pilot projects and not factoring in the catalytic policy, regulatory and standards development support provided to governments which may have a significant impact.*  
[https://www.thegef.org/sites/default/files/publications/GEF\\_EE\\_Methodology\\_v1.0\\_2.pdf](https://www.thegef.org/sites/default/files/publications/GEF_EE_Methodology_v1.0_2.pdf)

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[http://www.thegef.org/sites/default/files/documents/Results\\_Guidelines.pdf](http://www.thegef.org/sites/default/files/documents/Results_Guidelines.pdf)

### **Response:**

The GHG emission reduction target was reviewed in line with the GEF guidelines and other approaches. The earlier estimates are based on [https://www.thegef.org/sites/default/files/council-meeting-documents/C.33.Inf\\_18\\_Climate\\_Manual\\_1.pdf](https://www.thegef.org/sites/default/files/council-meeting-documents/C.33.Inf_18_Climate_Manual_1.pdf). This has been revised to as per suggestions to consider the recently proposed UNAATEE (Unlocking National Energy Efficiency Potential) strategic plan for energy efficiency for the top down approach and includes: 1) Direct Emission reductions from the pilots and investments that are catalytic with GEF TA interventions (Post-Project emission reductions) as these could be directly linked

to financing instruments and investments during the project period are estimated as 0.7 million tCO<sub>2</sub> to be confirmed during the PPG phase - (of initiatives directly supported by the FSP) and about 3.34 million tCO<sub>2</sub> (direct-post project emissions that are linked to UNAATEE) 2) Indirect emission reductions of 11.7 million tons.

-

The estimates of direct beneficiaries are based on target pilot buildings. However, it would be updated during the PPG phase.

**Response to comments March 20, 2020**

Agree and updated. Further vetting of the estimates will be carried out during the PPG Phase.

**Project/Program taxonomy**

**7. Is the project/ program properly tagged with the appropriate keywords as requested in Table G?**

**Secretariat Comment at PIF/Work Program Inclusion**

Yes

**Agency Response**

**Part II – Project Justification**

**1. Has the project/program described the global environmental / adaptation problems, including the root causes and barriers that need to be addressed?**

**Secretariat Comment at PIF/Work Program Inclusion**

The rapidly increasing demand of energy for cooling purposes and its contribution to rising GHG emissions of India is well articulated in the PIF. The root causes linked to limited uptake of improved building design standards to reduce cooling demand and super-efficient energy efficient technologies in the context of cooling is also elaborated well.

The paragraph 4 under the global environmental problems section is unclear to us. It says that if countries including India ratifies Kigali amendment, it will lead to 80% of high GWP refrigerants. How is this relevant in this project context?

March 20, 2020

Thanks for the response which is fine. One additional comment. The sections says:

"it may also be critical to deploy Best Available Techniques (BAT) on servicing aiming to increase or maintain the energy efficiency level of the AC's installed base (playing an important role in optimising India's energy demand for cooling in the coming decades);

Will the GEF project address this important aspect? Please indicate.

Paragraph 11, page no. 9 is not clear. Our understanding is that because Kigali does not deal with the heat island effect then this project proposes to address that since the heat island effect is partially due to increased use of air conditioning equipment. By making the equipment more energy efficient it will have an overall mitigating impact from the heat island effect. This paragraph is more related to resilience than global warming. Suggesting to simplify the sentences.

April 1: No additional comments.

## **Agency Response**

### **Comment:**

*The rapidly increasing demand of energy for cooling purposes and its contribution to rising GHG emissions of India is well articulated in the PIF. The root causes linked to limited uptake of improved building design standards to reduce cooling demand and super-efficient energy efficient technologies in the context of cooling is also elaborated well.*

*The paragraph 4 under the global environmental problems section is unclear to us. It says that if countries including India ratifies Kigali amendment, it will lead to 80% of high GWP refrigerants. How is this relevant in this project context?*

### **Response**

We would like to clarify that the referred Amendment in the PIF indicated that when enforced is “expected to achieve up to 80% of **reduction** of the global production and consumption of high GWP refrigerants by the year 2047, allowing a 20% tail consumption of these substances, after this date, for critical and essential uses. This notes the lower efficiency of low GWP refrigerants and thus contextualizes the overall efforts related to the Cooling Sector to energy efficiency with the goals of Montreal Protocol and the Kigali amendment.

However, India is Party to the Group 2 of the Kigali Amendment to the Montreal Protocol, meaning its reduction obligations will start four (4) years after the Parties to the Group1 (in 2029). Taking into consideration that the Kigali Amendment focuses on refrigerant transition, interventions on Energy Efficiency are dependent on incrementalities yet to be agreed by Parties. In this regard, this GEF Proposal takes advantage of the experiences gained by India to established critical strategic planning on thermal comfort efficiency.

### **Response to comments March 20, 2020**

Yes, BAT will be extended to energy efficiency interventions.  
Yes, the benefits of Heat Island effects have been included.

**2. Is the baseline scenario or any associated baseline projects appropriately described?**

**Secretariat Comment at PIF/Work Program Inclusion**

The agency is also requested to elaborate the India Cooling Action Plan more in the baseline. Also, please elaborate on notable co-financing (e.g. kfw credit line) as indicated in the co-financing section above.

Recently there have been a number of initiatives around energy efficient cooling in India including the latest Global Cooling Prize which identified five technologies one supported by the German government which identifies five innovative technologies for energy efficient cooling. The GEF project could build on this and support market acceleration of such technologies.

20 March, 2020

No additional comments.

**Agency Response**

**Comment:**

*The agency is also requested to elaborate the India Cooling Action Plan more in the baseline. Also, please elaborate on notable co-financing (e.g. kfw credit line) as indicated in the co-financing section above.*

*Recently there have been a number of initiatives around energy efficient cooling in India including the latest Global Cooling Prize which identified five technologies one supported by the German government which identifies five innovative technologies for energy efficient cooling. The GEF project could build on this and support market acceleration of such technologies.*

**Response**

The India Cooling Action Plan has been elaborated more in the baseline.

KfW cofinancing has been elaborates in the section above.

Cooling prize was mentioned earlier but now explicitly named as Global Cooling Prize in page 11 and page 18. During PPG phase, further linkages would be established as suggested.

**3. Does the proposed alternative scenario describe the expected outcomes and components of the project/program?**

### **Secretariat Comment at PIF/Work Program Inclusion**

The components and outcomes are elaborated well. As mentioned earlier, the agency is requested to elaborate in component 1 how the project will support development of policies and incentives that can directly drive investments and market acceleration of the super-efficient technologies for energy efficient cooling in buildings.

The project's focus on alignment of ECBC with Cooling Action Plan is welcome and could be transformative if institutional coordination and harmonization of codes could be achieved. We suggest to focus on this part more strongly under this project. More specifically codes and standards which could reduce cooling demand in buildings will be quite strategic given that there is exponential increase in demand.

On the technology side, we recommend to focus on energy efficiency aspect more. Where there is work around RACs, please note that it has to be zero GWP. Given that this could be covered under MP, the agency may like to reduce the focus on this project aspect if possible.

Points c and d in the table under paragraph 20 is a bit unclear. How will the project address these issues as the components of the project do not talk about standards and MEPS? Also, please elaborate if India has different EE standards for local and national companies.

Paragraph 25 under output 1.1.3 is one of the most important activities of this project. However, very little details is provided. Please also include name of proposed cities. The project may like to complement the recently approved PIF of sustainable cities impact program which focuses on four cities Pune, Surat, Chennai and Guwahati.

20 March 2020:

Please note that the alternate technology has to be Zero GWP as per a clear guidance from GEF Council. Any reference to lower-GWP technology alternative could not be supported through CCM focal area GEF trust fund.

Output 1.1.4 says that "BEE **intends** to apply". It indicates some uncertainty whether BEE will apply the BEP or not. Given that BEE is executing it, the Secretariat expects a full confidence that BEE will adopt the tools.

April 1, 2020: Thanks. The Secretariat appreciates the PIF's focus on Zero-GWP technologies only. Thanks for confirming that BEE is fully supportive to use the tool. The output still says "intends" which is assumed to be more definite. Please elaborate on how this tool will be integrated by BEE at the CEO ER stage.

April 10, 2020: Thanks. No additional comments

### **Agency Response Comment:**

*The components and outcomes are elaborated well. As mentioned earlier, the agency is requested to elaborate in component 1 how the project will support development of policies and incentives that can directly drive investments and market acceleration of the super-efficient technologies for energy efficient cooling in buildings.*

*The project's focus on alignment of ECBC with Cooling Action Plan is welcome and could be transformative if institutional coordination and harmonization of codes could be achieved. We suggest to focus on this part more strongly under this project. More specifically codes and standards which could reduce cooling demand in buildings will be quite strategic given that there is exponential increase in demand.*

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*Points c and d in the table under paragraph 20 is a bit unclear. How will the project address these issues as the components of the project do not talk about standards and MEPS? Also, please elaborate if India has different EE standards for local and national companies.*

*Paragraph 25 under output 1.1.3 is one of the most important activities of this project. However, very little details is provided. Please also include name of proposed cities. The project may like to complement the recently approved PIF of sustainable cities impact program which focuses on four cities Pune, Surat, Chennai and Guwahati.*

## **Response**

We confirm that all aspects related purely to refrigerant transition are and will continue to be funded exclusively by the Montreal Protocol, as these are fully covered and eligible for funding by the MLF. Any incremental (direct or indirect) aspect related to energy efficiency while transitioning out of the HCFCs not covered by MP, including all “hard” EE advances at equipment level are co-financed by manufacturers. A distinction and delineation will be taken into consideration in the PPG Phase.

The technology choice for refrigerant (and the proposed “cap” for “zero GWP” alternatives) is a highly delicate issue as it takes into consideration not only refrigerant per se, but also its applicability across sectors. This GEF Proposal intends to promote the use of the thermal comfort technologies with the highest energy efficient with lower GWP refrigerant possible, otherwise, committing to use only “zero GWP” refrigerants will severely restrict the use of technologies that are accepted, for example, by the F-Gas Regulation, or are being developed and tested by the Global Cooling Prize, to technologies that may not be even fully developed or available for commercial use or may not be used in residential and commercial thermal comfort, creating an extreme high risk for the implementation of this GEF Proposal.

Points c and d refers to the issue of aligning standards to avoid potential deployment of high-GWP and less efficient ACs in India’s AC market. This has been addressed in the alternative scenario under Component 1 and has been clarified. Under MLF, India focuses on RAC equipment’s manufactured locally only and has the same standards for both local and national companies

Para 25, Output 1.1.3 updated.

Suggested cities included.

## **Response to comments March 20, 2020**

Agree.

Output 1.1.4 is a priority and the term “intends” has been removed to emphasize the approach.

**4. Is the project/program aligned with focal area and/or Impact Program strategies?**

**Secretariat Comment at PIF/Work Program Inclusion**

The project is aligned with CCM 1-3 Promote innovation and technology transfer for sustainable energy breakthroughs for accelerating energy efficiency adoption. Please refer to comment above regarding alignment with CCM strategy on accelerators specific to CCM 1-3. There is a section on linking with existing accelerators which could be a bit more specific.

March 20, 2020: Comments cleared.

**Agency Response**

*The project is aligned with CCM 1-3 Promote innovation and technology transfer for sustainable energy breakthroughs for accelerating energy efficiency adoption. Please refer to comment above regarding alignment with CCM strategy on accelerators specific to CCM 1-3. There is a section on linking with existing accelerators which could be a bit more specific.*

**Response**

As above

**5. Is the incremental / additional cost reasoning properly described as per the Guidelines provided in GEF/C.31/12?**

**Secretariat Comment at PIF/Work Program Inclusion**

The project's incrementality is primarily described using the baseline of Montreal Protocol. The agency is requested to elaborate the incrementality based on existing energy efficiency market development and sustainable urban development (energy systems sustainability in cities) of India.

March 20, 2020: No additional comments.

**Agency Response**

*The project is aligned with CCM 1-3 Promote innovation and technology transfer for sustainable energy breakthroughs for accelerating energy efficiency adoption. Please refer to comment above regarding alignment with CCM strategy on accelerators specific to CCM 1-3. There is a section on linking with existing accelerators which could be a bit more specific.*

**Response**

As above



**6. Are the project's/program's indicative targeted contributions to global environmental benefits (measured through core indicators) reasonable and achievable? Or for adaptation benefits?**

**Secretariat Comment at PIF/Work Program Inclusion**

Please refer to comments earlier in this regard under point 6 of part I.

March 20, 2020: No additional comments

**Agency Response**

**Comment:**

*Please refer to comments earlier in this regard under point 6 of part I.*

**Response:**

Note above

**7. Is there potential for innovation, sustainability and scaling up in this project?**

**Secretariat Comment at PIF/Work Program Inclusion**

The project has strong potential for technology, business and policy innovation. The agency is requested to link the project with innovative approaches of BEE, EESL and other institutions to make it more strategic. Please refer to the comment regarding Global Cooling Prize.

20 March, 2020

No additional comments.

**Agency Response**

**Comment:**

*The project has strong potential for technology, business and policy innovation. The agency is requested to link the project with innovative approaches of BEE, EESL and other institutions to make it more strategic. Please refer to the comment regarding Global Cooling Prize.*

## **Response**

Comment addressed above

### **Project/Program Map and Coordinates**

**Is there a preliminary geo-reference to the project's/program's intended location?**

### **Secretariat Comment at PIF/Work Program Inclusion**

A long list is provided in Annex 1. However, the agency is requested to indicate the target cities at this stage in consultation with stakeholders and executing agencies. This could be modified during the CEO Endorsement stage.

Match 20, 2020: No additional comments.

## **Agency Response**

### **Stakeholders**

**Does the PIF/PFD include indicative information on Stakeholders engagement to date? If not, is the justification provided appropriate? Does the PIF/PFD include information about the proposed means of future engagement?**

### **Secretariat Comment at PIF/Work Program Inclusion**

A list of stakeholders is provided. However, the agency is requested to elaborate how were these stakeholders engaged during PIF development. Also, please provide details on the proposed means of future engagement.

20 March 2020

Thanks. No additional comments.

## **Agency Response**

**Comment;**

*A list of stakeholders is provided. However, the agency is requested to elaborate how were these stakeholders engaged during PIF development. Also, please provide details on the proposed means of future engagement.*

**Response**

This has been elaborated.

**Gender Equality and Women's Empowerment**

**Is the articulation of gender context and indicative information on the importance and need to promote gender equality and the empowerment of women, adequate?**

**Secretariat Comment at PIF/Work Program Inclusion**

The PIF currently highlights gender related issues but doesn't indicate how the project will address gender issues. Also, the issues are highlighted more from the perspective of safeguarding and indicating women's vulnerability. It doesn't suggest a proactive approach of engaging women in market development and decision making. The agency is requested to elaborate more covering various context of gender. Please refer to GEF's gender policy for guidance. <https://www.thegef.org/news/new-policy-gender-equality-gef>

March 20, 2020

Thanks for further elaboration. No additional comments.

**Agency Response****Comment;**

*The PIF currently highlights gender related issues but doesn't indicate how the project will address gender issues. Also, the issues are highlighted more from the perspective of safeguarding and indicating women's vulnerability. It doesn't suggest a proactive approach of engaging women in market development and decision making. The agency is requested to elaborate more covering various context of gender. Please refer to GEF's gender policy for guidance. <https://www.thegef.org/news/new-policy-gender-equality-gef>*

**Response**

The PIF includes elements of approaches to address gender issues to be addressed by the project. However, the PPG Phase will hire a gender expert to conduct gender analysis and prepare a gender action plan.

## **Private Sector Engagement**

**Is the case made for private sector engagement consistent with the proposed approach?**

### **Secretariat Comment at PIF/Work Program Inclusion**

The private sector engagement is obvious in the project. The case made is consistent with project design.

Match 20, 2020: No additional comments.

### **Agency Response**

#### **Comment;**

*The private sector engagement is obvious in the project. The case made is consistent with project design.*

#### **Response**

*NA*

## **Risks**

**Does the project/program consider potential major risks, including the consequences of climate change, that might prevent the project objectives from being achieved or may be resulting from project/program implementation, and propose measures that address these risks to be further developed during the project design?**

### **Secretariat Comment at PIF/Work Program Inclusion**

A good set of risks have been identified. The agency may like to add additional risks in light of the comments above.

Match 20, 2020: No additional comments.

### **Agency Response**

**Comment;**

*A good set of risks have been identified. The agency may like to add additional risks in light of the comments above.*

**Response**

No additional risks foreseen. However, PPG will do a detailed assessment of risks.

**Coordination**

**Is the institutional arrangement for project/program coordination including management, monitoring and evaluation outlined? Is there a description of possible coordination with relevant GEF-financed projects/programs and other bilateral/multilateral initiatives in the project/program area?**

**Secretariat Comment at PIF/Work Program Inclusion**

The institutional arrangement seems fine under the leadership of BEE. Given that there would be strong focus on cities, engagement of city authorities (beyond ULBs) is encouraged.

We noted the mention of UNDP's agreement with BEE for any project related support. Please note that as per GEF policy, implementation agency should not ideally play any executing function. Given that BEE and other agencies have strong capacity to execute the project, UNDP's executing function is not necessary for this project.

20 March, 2020

Thanks. No additional comments.

**Agency Response**

**Comment;**

*The institutional arrangement seems fine under the leadership of BEE. Given that there would be strong focus on cities, engagement of city authorities (beyond ULBs) is encouraged.*

*We noted the mention of UNDP's agreement with BEE for any project related support. Please note that as per GEF policy, implementation agency should not ideally play any executing function. Given that BEE and other agencies have strong capacity to execute the project, UNDP's executing function is not necessary for this project.*

**Response**

Agree

**Consistency with National Priorities**

**Has the project/program cited alignment with any of the recipient country's national strategies and plans or reports and assessments under relevant conventions?**

**Secretariat Comment at PIF/Work Program Inclusion**

A long list of national policies is provided including those which are not relevant such as UNCCD and CBD. Please include only directly linked policies and strategies. A reference to Smart City Mission and other initiatives could be useful.

March 202, 2020

Thanks. No additional comments.

April 1, 2020

The description of project's alignment with NDC and UNFCCC TNA indicates use of low-GWP technologies. As modified earlier the project should focus only on Zero-GWP technologies. Please modify to make the PIF consistent.

April 10, 2020: No additional comments.

**Agency Response**

**Comment:**

*A long list of national policies is provided including those which are not relevant such as UNCCD and CBD. Please include only directly linked policies and strategies. A reference to Smart City Mission and other initiatives could be useful.*

**Response**

Updated

**Response to comments April 1, 2020**

Modified as: "The project outcomes will support GHG emission reduction in the buildings sector towards zero GWP technologies.

## **Knowledge Management**

**Is the proposed “knowledge management (KM) approach” in line with GEF requirements to foster learning and sharing from relevant projects/programs, initiatives and evaluations; and contribute to the project’s/program’s overall impact and sustainability?**

### **Secretariat Comment at PIF/Work Program Inclusion**

Please elaborate how the knowledge management of this project will build on existing knowledge management initiatives of government, UNDP or other agencies. Given that there are a number of knowledge platforms related to energy efficiency in building, energy efficient technologies, etc. the project may benefit by complementing these platforms. A robust knowledge management plan could be developed in the PPG phase.

March 20, 2020

Thanks. No additional comments.

### **Agency Response**

Comment;

Please elaborate how the knowledge management of this project will build on existing knowledge management initiatives of government, UNDP or other agencies. Given that there are a number of knowledge platforms related to energy efficiency in building, energy efficient technologies, etc. the project may benefit by complementing these platforms. A robust knowledge management plan could be developed in the PPG phase.

Response

Agree

## **Part III – Country Endorsements**

**Has the project/program been endorsed by the country’s GEF Operational Focal Point and has the name and position been checked against the GEF data base?**

**Secretariat Comment at PIF/Work Program Inclusion**

Please provide endorsement letter signed by the current OFP of GEF.

March 20, 2020

The OFP letter is appropriate. Thanks.

**Agency Response** Attached.

Termsheet, reflow table and agency capacity in NGI Projects

Does the project provide sufficient detail in Annex A (indicative termsheet) to take a decision on the following selection criteria: co-financing ratios, financial terms and conditions, and financial additionality? If not, please provide comments. Does the project provide a detailed reflow table in Annex B to assess the project capacity of generating reflows? If not, please provide comments. After reading the questionnaire in Annex C, is the Partner Agency eligible to administer concessional finance? If not, please provide comments.

**Secretariat Comment at PIF/Work Program Inclusion****Agency Response****GEFSEC DECISION****RECOMMENDATION**

Is the PIF/PFD recommended for technical clearance? Is the PPG (if requested) being recommended for clearance?

**Secretariat Comment at PIF/Work Program Inclusion**



The agency is requested to consider the comments made and re-submit the PIF.

March 20, 2020

Please address additional comments and re-submit the PIF.

April 1, 2020

Please address one more comment mentioned under consistency with national priorities section. All other comments have been addressed.

April 4: Please refer to comment made earlier on April 1 on co-financing. Pasting the comment again for easy reference:

April 1: Thanks for the clarifications. Please confirm if BEE co-finance of \$9 million is grant investment mobilized or in-kind recurrent expenditure or grant recurrent expenditure. The co-finance table mentions municipalities co-financing twice. Are these two different municipalities? If not, why can't it be combined under one?

April 10 2020

Yes, the PIF is recommended for technical clearance.

April 15, 2020

The agency is requested to address the following three comments and resubmit the PIF:

1- The PPG and Agency Fee numbers in the LoE have a typo – while evidently this is a typo, we need the confirmation of the OFP that indeed her/his intent is to allocate \$150,000 for the PPG and the Agency Fee is \$433,970. This can be done via email sent to the GEF Secretariat.

2- On co-financing: Only 2 of the 4 investment mobilized have been described. The missing ones are highlighted below. Please provide for each source of "investment mobilized", a description how it was identified, including the definition/ approach used to differentiate between "investment mobilized" and "recurrent expenditures". For further details, please refer to the Co-Financing Guidelines. Also, for the US\$68 M co-financing from “SBI – KfW line of credit”, please provide the name of the entity that provides the co-financing. If KfW is the source which is a German development bank, indicate “donor Agency” as the source.

3- On Environmental and Social Safeguards: Section 5 of the PIF provide the overall project rating and indicate that a pre-screening of environment and social aspects categorizes the project in moderate environment and social risk category. The project also indicate that PPG will include assessments for developing Environment and social risk mitigation framework and plan as necessary. Please attach UNDP's Social and Environmental Screening (SESP) Checklist (if available) and or provide more indicative information, in line with the GEF Policy on Environmental and Social Safeguards, regarding any Environmental and Social Risks and potential Impacts associated with the proposed project or program

April 20, 2020

Thank you. All comments have been addressed. The project is recommended for technical clearance.

ADDITIONAL COMMENTS

Additional recommendations to be considered by Agency at the time of CEO endorsement/approval.

Secretariat Comment at PIF/Work Program Inclusion

As noted in the review sheet regarding additional analysis to be carried out during PPG phase, the agency is requested to provide those details at the CEO Endorsement stage.

Review Dates

	PIF Review	Agency Response
First Review		
Additional Review (as necessary)		
Additional Review (as necessary)		
Additional Review (as necessary)		
Additional Review (as necessary)		

PIF Recommendation to CEO

### **Brief reasoning for recommendations to CEO for PIF Approval**

The UNDP project (GEF ID 10370) “ Accelerating adoption of super-efficient technologies for sustainable thermal comfort in buildings in India” is well aligned with GEF 7 climate change mitigation focal area and India’s NDC, energy policies and cooling action plan. The demand for space cooling in buildings in India is expected to increase eleven times from the current level over the next twenty years. As a consequence, energy demand from refrigeration and air conditioning applications for buildings is estimated to grow from currently 10 percent to 45 percent by 2050. While there are efforts to make buildings energy efficient through energy efficiency building codes and refrigerant conversion under the MLF, they are not sufficient to address the rapidly increasing cooling demand and subsequent increase in GHG emissions. The proposed project aims to harmonize policies related to building codes, cooling, energy efficiency and building bye-laws; support market acceleration and innovation of super energy-efficient and zero GWP cooling applications; and strengthen capacity of policy makers, consumers and market players for effective implementation of solutions. The project will establish linkage with global accelerator platforms such as SE4ALL, Building Energy Accelerator Platform, Global Cooling Prize, Kigali Cooling Efficiency Program and GPSC to learn from best practices and contribute to these accelerators with evidence generated under the project.

The project adopts a systems based and integrated approach to tackle rising GHG emissions from the building sector in India. It will facilitate coordination between national, state and municipal institutions to harmonize policies, engage market players to introduce and accelerate deployment of energy efficient cooling technologies and induce consumer behavior to adopt climate friendly technologies to meet their cooling demand. Therefore, the approach is quite holistic to deliver transformational change. **The project is expected to reduce 4.1 million tons of GHG emissions and also tackle growing heat island effect in built environment in cities. The project is designed on a strong baseline with a significant co-finance from government, bilateral donors and the private sector.** The project directly complements Indian government’s efforts under the Montreal Protocol for refrigerants conversion. Innovation is quite central to the project design and introduction of new technologies, energy management tools and harmonized codes will have sustainable impact beyond the project period.

Based on the above, the CEO is requested to approve the PIF.