

Part I: Project Information

GEF ID 10087

Project Title Accelerating investment in efficient and renewable district energy systems in Chile

Date of Screening 12/4/2018

Screener Sunday Leonard

Panel Member Ferenc Toth

STAP Overall Assessment Minor

Part I: Project Information**B. Indicative Project Description Summary**

Project Objective	What STAP looks for	Response
Project Objective	Is the objective clearly defined, and consistently related to the problem diagnosis?	yes
Project components	A brief description of the planned activities. Do these support the project's objectives?	yes
Outcomes	A description of the expected short-term and Do the planned outcomes encompass Are the global environmental benefits likely	yes, provided yes, reduction of GHG emissions, especially black yes
Outputs	A description of the products and services which are expected to result from the	yes
Part II: Project justification	A simple narrative explaining the project's logic, i.e. a theory of change.	No explicit theory of change but the sequence of components, outputs and the resulting outcomes provide an internally consistent logical framework
1. Project description. Briefly describe:		
1) the global environmental and/or	Is the problem statement well-defined?	yes
2) the barriers and threats to the project's success	Are the barriers and threats well described,	yes

	For multiple focal area projects: does the problem statement and analysis identify the drivers of environmental degradation which need to be addressed through multiple focal	Not an MFA project
2) the baseline scenario or any associated	Is the baseline identified clearly? Does it	yes
	Does it provide a feasible basis for quantifying the project's benefits?	yes
	Is the baseline sufficiently robust to support the incremental (additional cost) reasoning for the project?	yes
	For multiple focal area projects: are the multiple baseline analyses presented (supported by data and references), and the multiple benefits specified, including the proposed indicators;	Not applicable
	are the lessons learned from similar or related past GEF and non-GEF interventions described; and	Not applicable
	how did these lessons inform the design of this project?	Not applicable
3) the proposed alternative scenario with a brief description of expected outcomes and components of the project	What is the theory of change?	No explicit theory of change but the sequence of components, outputs and the resulting outcomes provide an internally consistent logical framework.

What is the sequence of events (required or expected) that will lead to the desired outcomes?

Establish umbrella organization (NDEO) and develop/adopt a supporting methodological approach. NDEO will use the method to review and select pilot projects that will demonstrate financial feasibility by initiating a tender and capitalize the revised financial schemes, based on which enabling national and local regulatory frameworks can be designed, complemented by outreach, training and dissemination activities

· What is the set of linked activities, outputs, and outcomes to address the project's objectives?

properly explained

· Are the mechanisms of change plausible, and is there a well-informed identification of the underlying assumptions?

Yes, but it is important to provide some clarification. The main thread of the project is to replace firewood heating with other energy sources. However, the alternative energy source is not clearly indicated in the PIF. Given that different energy sources will provide different outcomes, the project team needed to provide clarification. See further note in the section on global environmental benefits

· Is there a recognition of what adaptations may be required during project implementation to respond to changing conditions in pursuit of the targeted outcomes?

Some aspects included implicitly in the alternative scenario

5) incremental/additional cost reasoning and expected contributions from the baseline, the GEF trust fund, LDCF, SCCF, and co-financing

GEF trust fund: will the proposed incremental activities lead to the delivery of global environmental benefits?

Yes, although possibly not the magnitude presented in the PIF, see below

	LDCF/SCCF: will the proposed incremental activities lead to adaptation which reduces vulnerability, builds adaptive capacity, and increases resilience to climate change?	n/a
6) global environmental benefits (GEF trust fund) and/or adaptation benefits (LDCF/SCCF)	Are the benefits truly global environmental benefits, and are they measurable?	yes
	Is the scale of projected benefits both plausible and compelling in relation to the proposed investment?	Yes, especially if the non-climatic ancillary benefits are considered

Are the global environmental benefits explicitly defined?

Yes, but the calculations are confusing at best, and possibly wrong and should be corrected. The main thread of the project is to replace firewood heating (generating mostly local pollution and some black carbon, but almost CO₂-neutral on the full fuel cycle basis) with other energy sources. First, it is unclear whether all energy sources in the new system would be fully CO₂-free. If the CHP explicitly mentioned is based on natural gas, it is low-carbon, but not carbon-free and should be accounted for. Yet the main problem is that the calculated emission savings do not seem to account for the CO₂ sequestered by the growing trees in the current fuelwood based system that will not be included in the new system. The correct way to calculate the net GHG savings would be to compare the net emissions (actual minus sequestered by trees) in the current system with the net emissions of the new system. Another issue to clarify is "indirect" emissions reductions stemming from projects far beyond the lifetime of this project. Indirect emissions reductions would more likely come from the improvements of infrastructure (house insulation, etc.) also implemented as part of this project. The PIF mentions the description of the methodology used in the calculations in the "following paragraphs" but there are no such paragraphs.

	<p>Are indicators, or methodologies, provided to demonstrate how the global environmental benefits will be measured and monitored during project implementation?</p>	<p>Not really. The PIF indicates that in Component 2 fact sheets with lessons about technical and economic characteristics of the three pilots will be developed, there is nothing about the environmental aspects. STAP recommends adding environmental characteristics to these fact sheets.</p>
	<p>What activities will be implemented to increase the project's resilience to climate change?</p>	<p>Not specified in the PIF, but this is needed. STAP advises the project team to assess the sensitivity of the physical project outcomes (new infrastructure and equipment) to climate change and prepare adaptation actions. See more detail under climate risk.</p>
<p>7) innovative, sustainability and potential for scaling-up</p>	<p>Is the project innovative, for example, in its design, method of financing, technology, business model, policy, monitoring and evaluation, or learning?</p> <p>Is there a clearly-articulated vision of how the innovation will be scaled-up, for example, over time, across geographies, among institutional actors?</p> <p>Will incremental adaptation be required, or more fundamental transformational change to achieve long term sustainability?</p>	<p>Yes: innovative design, introducing technologies largely absent in Chile - a combination of policy and business model innovation</p> <p>Yes: the establishment of NDEO will continue beyond project's close to pursue district energy solutions in other regions</p> <p>The introduction of district energy systems is a fundamental transformation of space and water heating</p>
<p>1b. Project Map and Coordinates. Please provide geo-referenced information and map where the project interventions will take place.</p>		<p>List and map provided</p>

2. Stakeholders. Select the stakeholders that have participated in consultations during the project identification phase: Indigenous people and local communities; Civil society organizations; Private sector entities. If none of the above, please explain why. In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement.

Have all the key relevant stakeholders been identified to cover the complexity of the problem, and project implementation barriers? yes

What are the stakeholders' roles, and how will their combined roles contribute to robust project design, to achieving global environmental outcomes, and to lessons learned and knowledge?

The initial project preparation involved key stakeholders. Their roles and contributions to the project are clearly stated

3. Gender Equality and Women's

Empowerment. Please briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis). Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment? Yes/no/ tbd. If possible, indicate in which results area(s) the project is expected to contribute to gender equality: access to and control over resources; participation and decision-making; and/or economic benefits or services. Will the project's results framework or logical framework include gender-sensitive indicators? yes/no /tbd

Have gender differentiated risks and opportunities been identified, and were preliminary response measures described that would address these differences?

Yes, gender equality considered seriously. Women, together with children and elderly, are exposed to the negative impacts of the current system. A list of gender-sensitive activities is provided.

5. Risks. Indicate risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the project design

Do gender considerations hinder full participation of an important stakeholder group (or groups)? If so, how will these obstacles be addressed?

No

Are the identified risks valid and comprehensive? Are the risks specifically for things outside the project's control?

The list of risks identified seems to include items that are mostly likely to jeopardize the project, all are external. The risk management plan needs to be improved because what is currently specified as strategy for the first two items (inadequate support, lack of interest) is more an observation about risk mitigating factors, rather than a risk management strategy

Are there social and environmental risks which could affect the project?

Yes, mostly social, e.g lack of interest by communities and other stakeholders to put in place the necessary regulations and issue calls for proposals. These risks might be modest, but STAP suggests that the project team prepare more specific risk management action plans, just in case.

For climate risk, and climate resilience measures:

· How will the project's objectives or outputs be affected by climate risks over the period 2020 to 2050, and have the impact of these risks been addressed adequately?

Limited information provided in the PIF. However, this is an important aspect to the success of the project. Several scientific literature indicate that climate change could affect the performance and success of district energy systems (please see: <http://uccrn.org/files/2014/02/ARC3-Chapter-4.pdf>; https://ac.els-cdn.com/S1876610214028781/1-s2.0-S1876610214028781-main.pdf?_tid=e25ef807-ad51-4c29-85df-6c6d2a95b72b&acdnat=1543966738_87b5042aa3e269f9d02c13b720e10420; <http://www.klab.ee/kohanemine/en/sectors/energy/>). It is therefore important that this is considered during the further development of the project

· Has the sensitivity to climate change, and its impacts, been assessed? Limited information provided in the PIF. However, this is an important aspect to the success of the project. Several scientific literature indicate that climate change could affect the performance and success of district energy systems (please see: <http://uccrn.org/files/2014/02/ARC3-Chapter-4.pdf>; https://ac.els-cdn.com/S1876610214028781/1-s2.0-S1876610214028781-main.pdf?_tid=e25ef807-ad51-4c29-85df-6c6d2a95b72b&acdnat=1543966738_87b5042aa3e269f9d02c13b720e10420; <http://www.klab.ee/kohanemine/en/sectors/energy/>). It is therefore important that this is considered during the further development of the project

· Have resilience practices and measures to address projected climate risks and impacts been considered? How will these be dealt with? No. STAP advises the project team to conduct a climate vulnerability assessment and plan actions to increase the resilience of the project's outcomes.

· What technical and institutional capacity, and information, will be needed to address climate risks and resilience enhancement measures? Not specified and should be part of the climate resilience activity - see above.

6. Coordination. Outline the coordination with other relevant GEF-financed and other related initiatives

Are the project proponents tapping into relevant knowledge and learning generated by other projects, including GEF projects? yes

Is there adequate recognition of previous projects and the learning derived from them? yes

Have specific lessons learned from previous projects been cited? yes

	How have these lessons informed the project's formulation?	yes
<p>8. Knowledge management. Outline the "Knowledge Management Approach" for the project, and how it will contribute to the project's overall impact, including plans to learn from relevant projects, initiatives and evaluations.</p>	<p>Is there an adequate mechanism to feed the lessons learned from earlier projects into this project, and to share lessons learned from it into future projects?</p> <p>What overall approach will be taken, and what knowledge management indicators and metrics will be used?</p>	<p>yes</p> <p>The KM plan is somewhat underdeveloped. There are detailed plans for a website, its structure and content, but very little about other KM efforts. Given the potential importance of this project and the lessons expected to emerge, STAP recommends that the project team prepare a more detailed KM plan, including KM indicators and metrics. The STAP document <i>Managing knowledge for a sustainable future</i> https://www.thegef.org/sites/default/files/publications/STAP%20Report%20on%20KM.pdf is good source of advice.</p>
	<p>What plans are proposed for sharing, disseminating and scaling-up results, lessons and experience?</p>	<p>Practically none beyond the website. See the related KM recommendation above.</p>

STAP Notes