January 22, 2014

Response from IFC—Approval by Mail: SREP Ethiopia: Lighting Ethiopia (IFC) - response to TFC comments

LIGHTING ETHIOPIA PROGRAM

IFC Responses to the comments from Trust Fund Committee members

Comments from UK

Comment	As we highlighted at the time of the Investment Plan approval, there is a potential risk of duplication of this facility with the Climate Innovation Centre which is shortly to open in Ethiopia funded by the UK and Norway. We have requested information on the co-ordination and respective positioning of these two projects, and IFC has undertaken to provide clarification on this in response to these comments.
IFC response	IFC would like to confirm that the Lighting Ethiopia project team has liaised with InfoDev and, specifically, spoken with the lead for CIC Ethiopia on our respective scopes of work. There is agreement that there is no overlap between our respective activities: CIC will provide business development support and financing to a range of companies producing climate-friendly or climate adaptive products, such as stoves, irrigation system, and also lighting; meanwhile Lighting Ethiopia will focus on sector-level interventions designed to open the market for solar LED lighting device companies specifically. CIC colleagues have indicated that these initiatives are potentially complimentary, rather than duplicative, in that Lighting Ethiopia's work on consumer awareness, tax incentives and other product standards may in fact help to address barriers to market entry for companies that CIC is supporting. We will continue to maintain contact as the work progresses.
Comment	We would appreciate further information on the **rationale for the project to focus just on lighting**, rather than a more comprehensive approach to clean energy SMEs. This could make sense, given the number of other actors in the sector and the potential comparative advantage of IFC - however we would like to see evidence of this thinking and the consultation behind it reflected in the project document. Information on through what means other Clean Energy SMEs might be supported would be useful (given this was the original focus of the IP), as well as how productive uses (a focus for SREP) would be targeted
IFC response	IFC would like to confirm that the focus on the lighting sector under the SREP Program was arrived after extensive discussions with and <u>at the request</u> of the Government of Ethiopia. IFC's discussions and on-the-ground diligence revealed that there are several bilateral agencies and other foundations with funding programs in Ethiopia that are focused on cookstoves and cooking fuels. For example, GoE has received about US$5 million from donors for the dissemination of improved stove technology and biogasifiers to be supplied largely to rural populations through government programs or micro-enterprises. However, there is little, if any, support for lighting devices. Nor is there a focus on urban and peri-urban markets, which some of the lighting device companies entering the market are likely to target. Based on these findings, and following extensive discussions with MOWIE (Ministry of Water, Irrigation, and Energy), the Ethiopian business association promoting clean energy products and services, as well as various agencies and partners active in Ethiopia, it became

clear that there was a gap in the lighting subsector, and therefore, the government of Ethiopia, requested that IFC's efforts in SREP focus in this area. . IFC would like to note that there appears to be genuine commitment on the part of MOWIE to advancing a range of clean energy technologies, including lighting in multiple markets, from BOP households to small retail and services businesses (restaurants, markets, shops) to institutions (schools, clinics). Moreover, we have observed increasing openness to supporting market-oriented clean energy initiatives to compliment public-sector programs. To the extent that they do not have access to the power grid or suffer unreliable supply, high-quality lighting devices will be one of the clean energy needs of these customers.

Comment It would be helpful to have some **information on risks**. Although lantern costs at $10 is very low, this remains not insignificant to a family at the 'bottom of the pyramid' – and further information on safeguards (such as warranties) for poorer consumers would be welcome. Additionally, although the Kenya example is cited as a success, are there any **risks that might apply in the Ethiopian context** that were less prominent in the Kenyan context – for example related to investment conditions or private sector development?

IFC Response As part of our due diligence, IFC's findings from our market research in Ethiopia on a sample 2,000 households across 4 regions reveals that families in bottom-of-pyramid households in Ethiopia spend about $21 per year on kerosene (see table below on Rural household energy use for lighting by expenditure quintile) for lighting—in other words, two times the amount they would pay for an entry level lantern. However, the $21 for kerosene is expensed in small amounts over a period of time, whereas the $10 for the solar lanterns is an upfront expenditure paid in full. Therefore, the challenge is not the cost of the lantern, but the ability of poorer consumers to pay for the lantern in smaller installments that falls within their capacity to pay within their household cash-flow patterns/disposable incomes. To address this challenge, in Kenya and Ghana, micro-finance institutions (MFIs) and village savings groups, savings & credit cooperative organizations (SACCOs) proved to be an effective way to enable bottom-of-pyramid consumers to purchase modern lighting devices. The program will undertake a similar approach with the necessary adjustments as needed for the Ethiopian market context. The prospects of success are high given that World Bank has provided a credit line targeted at six regional micro-finance institutions that in turn will provide micro loans to self-help groups and consumers. The program will work with these intermediaries to provide training on clean energy products and link with them with the supply chain and local distributors in an attempt to bridge this affordability gap.

Rural Household Energy Use for Lighting by Expenditure Quintile

Expenditure Quintile	HHs using Kerosene for lighting (%)	Expenditure on Kerosene for lighting (ETB/Month)	HHs using dry cell batteries for lighting (%)	Expenditure on dry cell for lighting (ETB/Month)	Expenditure on Lighting as % of total Expenditure
1 (lowest 20%)	83.4	32.7	49.3	12	7.2
2 (second 20%)	79.4	37.0	65.1	14	5.4
3 (middle 20%)	83.5	38.0	65.6	14	4.1
4 (fourth 20%)	81.7	41.1	69.7	16	3.3
5 (highest 20%)	83.9	45.6	72.9	17	2.5
Total	82.4	38.9	64.6	15	4.5

Source: IFC Lighting Africa: Ethiopia Market Intelligence report 2013) Exchange rate: I USD = 18.5 Ethiopia Birr (ETB)

	Redemption of warranties has been a major challenge in rural areas given the fact that retail outlets are few, and only located in major towns. Consumers are therefore forced to go to great lengths redeem warranties. Retail expansion may take some time as it involves some level of investment from the entrepreneurs. To overcome this challenge, the Lighting Ethiopia program in conjunction with the Ministry of Energy, will train local technicians who will in turn enter into contractual agreements with manufacturers to redeem/execute their warranties and upon their lapse provide after sales service. This is a key element of the business development component of the program as a weak after sales services structure was highlighted as a key barrier in the Ethiopia market intelligence research.
Comment	Building on the point made by the Netherlands, product uptake is put forward as the main indicator of success in Kenya, but is there **more evidence available from Kenya regarding sustained use of solar lights, and whether uptake has had the stated impacts on health, livelihoods etc.**? We also believe that M&E on this project when approved should follow through as far as beneficiary feedback on products and the stated impacts.
IFC Response	In the third quarter of 2013 Lighting Africa undertook a study to assess the impact of the consumer education campaign The study focused on Kenyan households in areas that had been targeted by the consumer education campaign between 2010 and 2013. A total 600 households were targeted across 100 villages. Six households were sampled in each village. For those with a solar lantern, when asked the year when they had acquired the products, they responded as follows: 52.6% in 2013, 32.7% in 2012, 9.0% in 2011 and 3 3.8% mentioned 2010. The remaining between 2000 and 2009. This suggests a sustained level of usage and a steady growth in the use of solar lanterns as demonstrated by the yearly increases in the number of households adopting the lanterns. We also have anecdotal evidence from MFIs and their self-help group members that make regular (weekly/monthly) payments. MFIs enjoy a very close rapport with their members as loan officers maintain a regular routine of field visits to collect repayments for solar lanterns loans which have an average of 8 – 12 months tenure. There are eight MFIs in Kenya providing loans to consumers and self helps groups – they have reported positive feedback from consumers who have transitioned from fuel based lighting. Development impact: we have attached a third party study undertaken by Solar Aid/Sunny Money who is currently the largest distributors of solar lanterns in Africa (Research Findings – Follow up Kenya/WDI Case – Access to Clean Lighting). Though limited in scope, the study provides an insight into the development impact of better lighting especially on education and savings that have been channelled towards more productive use. To date no comprehensive scientific study has been undertaken on the development impact of better lighting, but a joint WB Group and GIZ team has finalised the design and framework for a household study that will be undertaken soon. It should be noted that the Lighting Ethiopia program under SREP has allocated $75,000 to undertake a post implementation M&E that will also include the beneficiaries.
Comment	There is a reference in the M&E section to geothermal contracts signed which we assume is an error.
IFC Response	This is an error
Comment	The carbon emission reductions are aligned to **Ethiopia's Climate Resilient Green Economy (CRGE) vision**, but Ethiopia is also keen to access carbon finance in return for savings made towards CRGE – would there be value in an MRV component to help build evidence for that in future beyond

	SREP support?
IFC response	This may not be an economical proposition given that the carbon credit prices have dramatically fallen in the last 3 years and stand at less than $0.50 per ton. At this price level, the developers do not stand to make any reasonable returns given the high cost of setting up the CDM projects. In addition, solar lanterns, unlike cook stoves, have a very low carbon credit contribution per unit and require significant sales volume to maintain positive returns. It does, however, make sense to set up an MRV for cook stoves project.
Comment	On coordination with Government, it would be useful to acknowledge the need to align and include relevant lighting strategies into the Government's proposed new **energy policy and other planning processes** (noting also the separate geothermal strategy proposed, and the risk of multiplication of sub-sectoral strategies).
IFC response	IFC agrees on the importance of ensuring alignment of various sub-sector strategies within the energy sector. IFC has, over the past three years, developed strong working relationships with key individuals within MOWIE who are collectively involved in all major sub-sectors of the energy sector. IFC will continue to work closely with MOWIE to promote a coordinated approach to energy policy design and planning processes, where appropriate.
Comment	On **gender**, it seems assumed that a) women should be the ones to benefit from working after hours and b) that they should do so via embroidery and crafts. While gender benefits are important, these should not be assumed and we would appreciate reference to any relevant evidence which has looked at women's needs, priorities, options, and the constraints to opening those opportunities via lighting. It would also be useful to understand the gender strategy for the project.
IFC response	The gender strategy for the program will center on: (i) seeking to involve women in the supply chain for solar lanterns and (ii) identifying income generation activities undertaken by women that can be enhanced by better or more hours of lighting. Lighting Africa has undertaken a study in Kenya evaluating the potential of women's self-help group in the supply chain, and the support they would require to gain traction. The findings were very positive indicating that with targeted support, the groups are an attractive distribution channel given their close relationship and last-mile interface with the consumers. The objective is to customize this approach for the Ethiopian market (attached report & web link: Role of Women in the uptake of solar lanterns & http://www.gvepinternational.org/en/business/solar-power) IFC has not undertaken formal study on the impact on the economic activities undertaken by women, but has relied on the results from a retail audit undertaken by Coca Cola on the impact of better/longer hours of lighting targeting 100 outlets—48 percent of which were owned by women. The results of their audit indicated that 92 percent of the outlets reported an increase in their business with nearly half of them (45%) registering an average of $23 increase over a period of two weeks. 88% of the outlets reported that they would consider buying the lighting products. IFC's Lighting Ethiopia gender strategy focuses on targeting women-owned enterprises and has been based on the experience from Lighting Kenya and the positive results from other initiatives such as Sunny Money/Solar Aid, Coca Cola etc.

Comments from Netherlands

Comment	There seems to be no clear and urgent reason to submit this proposal as "confidential". We prefer SREP to be completely transparent and SREP information public, in order to allow for maximum synergy and alignment. Would it be possible to lift the confidentiality?
IFC response	Please refer to the response provided by CIFAU on this point. We would like to reiterate that a public version of the program proposal has been posted.
Comment	The proposal is one of two proposals that give content to the component "Clean Energy SMEs Capacity Building and Investment Facility" of the original investment plan. This component was to be financed partly as grant and partly as loan. We observe that the two proposals presented are grant only. Can this be clarified?
IFC response	The Lighting Africa piece relates to the grant portion or the advisory services part of the "Clean Energy SMEs Capacity Building and Investment Facility" component. As indicated in previous semi-annual reports, the investment facility is facing delays because local financial intermediaries are experiencing a liquidity squeeze in the market, and therefore not in a position to introduce new lending products. Instead of holding up the implementation of the Clean Energy SME component under SREP until the liquidity conditions in the financial sector changes, the government and IFC have agreed to move forward with the implementation of the advisory services part of the Clean Energy SME component only. The investment facility remains to be implemented and IFC will come back to the Sub-Committee for approval when the investment program is designed. The second grant proposal that the Sub-Committee had reviewed and approved is under the "Design of a Long-Term Strategy for Geothermal Sector" component that was part of Ethiopia's endorsed Investment Plan.
Comment	The proposal does not describe the ownership of the government of Ethiopia and the participation of Ethiopian stakeholders in its design. Can this be clarified?
IFC Response	The government of Ethiopia is a key stakeholder in the Lighting Ethiopia program. As indicated above, it was the decision of and at the request made by the Ministry of Energy for IFC to focus its efforts under SREP on lighting. Moreover, the Ministry will be one of the key partners especially on the training of local technicians to provide after sales service and in the consumer education campaigns. The program enjoys a close working relationship and partnership with the government. For example, the GoE has provided a waiver for all solar lanterns that meet Lighting Africa quality standards and regularly processes exemption requests from importers that are in turn forwarded to Customs & Excise dept. In addition, they are also the vetting agent (for quality standards) for the World Bank's US$40m credit line with the Development Bank of Ethiopia for importers of solar lanterns. To date US$4.5m trade finance loans have been approved for an estimated 125,000 lanterns. As project implementation begins, the Ministry of Energy will continue to be one of the key stakeholders and , the other local stakeholders include (i) local importers/distributors (ii) standards bureau (iii) supply chain partners at a national, regional and retail level as well as energy access programs (iv) NGOs and community based organisations and (v) financial intermediaries amongst others etc.
Comment	The proposal is not clear on the feasibility and suitability of the Lighting Africa approach for the specific context in Ethiopia. It is not clear how the proposal builds on lessons learned with rural lighting in Ethiopia and work in synergy with other programs (such as EnDev). Can this be clarified?

IFC Response	The key success factor of a market based approach is in having a bottoms-up development plan that is informed by local insights and context. As a first step, the World Bank has undertaken a market research that targeted 2,000 households and the supply chain to understand the consumers, markets and distributions systems. IFC also met with a number of stakeholders including local importers distributors to determine their needs, and above all priorities in the development of the program. IFC intends to undertake some deeper analysis especially on the supply chain, financing intermediaries and support structures for after sales services. EnDev is implementing a field based program engaging with the last mile that complements well with Lighting Ethiopia's sector-level approach model (standards, policy, financing and awareness.). IFC does not envisage an overlap of activities, rather we anticipate the synergies to maximise the impact of the two programs. The Lighting Ethiopia team will map out a collaborative approach on the implementation of the program with EnDev in the coming weeks that will leverage the respective strengths, key focus areas, and experience of each organization. The collaboration will extend to other local energy access projects such as on solar kiosks and the new efforts that may follow under the new US Power Africa Initiative.
Comment	The proposal intends to build on the success of the Lighting Africa approach in Kenya. We have however not seen an independent evaluation of Lighting Africa (in Kenya, Ghana and the other countries where it has been active to date) and have not seen the "internal project completion document" that the proposal refers to. Can these documents be made available?
IFC Response	The program is in the process of finalising the recruitment of a firm that will undertake an independent evaluation of the program. We expect to have the final report in May 2014. In addition, we are enclosing below the summary of the Lighting Africa program's achievements that was referenced in the "internal completion documents"
Comment	We welcome the focus of the proposal on promotion of lighting for income generating activities of women and would advise a budget shift from disproportionally heavy budget elements "consumer education" and "program management" to specific interventions in this field.
IFC Response	IFC will re-assess the costs and explore areas for re-alignment. Our experience to date has shown that a public awareness and education campaign for the end consumer and various other actors in the low-cost lighting segment is perhaps one of the most critical elements in the development of the market as it also impacts: (i) quality assurance for manufacturers, (ii) education of consumers on differentiating good quality products from the low quality ones infiltrating the market and on the economic and social benefits of solar lanterns, (iii) education of supply chain actors on solar products, (iv) training and technical assistance to financial intermediaries such as MFIs and self-help groups forums, through dedicated segments e.g. women's groups, faith based organisations etc. (v) demand creation, opening rural markets and scaling up adoption of solar lanterns Moreover, to ensure that the communication is effective, it needs to be provided in local languages—and there are over 10 local languages in the case of Ethiopia that the project team will translate the various communication materials into (media & print). Additionally, at a meeting in Addis Ababa in December 2013 of manufacturers of solar lanterns consumer education/awareness, working capital/financing and high tariffs were ranked as their top three challenges to expanding and growing their business. The areas of focus and budgets for the

	program have been developed in line with this prioritization but we remain open to revisit this. On the management costs, IFC anticipates a program manager and a support team to help manage all the various activities of the program. A market development program is extensive in nature covering five components and will be working with close to 15 local distributors and importers as well as other intermediaries. It is therefore important to maintain a structure that provides adequate support and capacity to effectively implement the activities.
Comment	The proposal describes co-funding by IFC. It is unclear whether this is actually co-funding from the Netherlands through the Netherlands-IFC Partnership Program. Can this be clarified?
IFC response	All co-funding sources have not yet been fully identified since IFC is negotiation with a few partners. However, we can indeed confirm that no co-funding is coming from the Netherlands-IFC Partnership Program.