Climate Investment Funds

SREP/SC.7/5
April 13, 2012

Meeting of the SREP Sub-Committee
Washington, D.C.
May 1, 2012

Agenda Item 6

INVESTMENT PLAN FOR ETHIOPIA: RESPONSES TO QUESTIONS

Proposed Decision by the SREP Sub-Committee

The Sub-Committee welcomes the additional information provided by Ethiopia on its investment plan, document SREP/SC.7/5, *Investment Plan for Ethiopia (responses to questions)*, and reconfirms its endorsement of the Ethiopia Investment Plan as a basis for the further development of the projects foreseen in the plan.

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The Federal Democratic Republic of Ethiopia
ENVIRONMENTAL PROTECTION AUTHORITY

ቀን 5 APR 2012
Date

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Ref. No.

Ms Patricia Bliss Guest
Program Manager
CIF Administrative Unit
1818 H Street NW
Washington, D.C. 20433
www.climateinvestmentfunds.org
cifevents@worldbank.org

Dear Ms Patricia Bliss-Guest,

It is to be recalled that the SREP sub-committee in its deliberation in March 2012 endorsed, in principle, the Ethiopian SREP IP seeking clarification on a number of points. I am pleased to send you the clarifications as an attachment to this letter. I would like to take this opportunity to thank once again the CIF AU for the support extended to us at various instances and appreciate it if you could forward the responses we have outlined in the attached document to the SREP Sub-Committee members ahead of the May, 2012 meeting.

I would once again like to re-iterate the conviction of the Ethiopian government that the SREP will highly contribute for the implementation of the Climate Resilient Green Economy Strategy of Ethiopia, and we will be pleased to clarify further thoughts in line with the IP already communicated to the SREP sub-committee.

Yours sincerely,

Dessalegne Mesfin

SREP Ethiopia Focal Point

Attached:

SREP Ethiopia Investment Plan – Additional Questions & Answers

☎ 251-011-646 5007
251-011-646 4604
251-011-646 4898
✉ 12760
ቴሌ ፋክስ
TELE FAX: 251-011-646 4882/76
አዲስ አበባ ፡ ኢትዮጵያ
Addis Ababa-Ethiopia
E-mail: esid@ethionet.et
Website:www.epa.gov.et

SREP ETHIOPIA INVESTMENT PLAN – ADDITIONAL QUESTIONS & ANSWERS

#	Issues/Questions/Comments	Raised	Answers
1	In its answer to the Swiss comments, Ethiopia contended that, depending on definition, electricity access is at present 41%. Please confirm/document that figure notably explaining under which definition is reached.	Switzerland	The GoE as an indicator for electricity access uses the percentage of rural towns and villages connected to the grid. This indicator is currently at 41% from 16% in 2005. As indicated in the SREP IP, the Government of Ethiopia (GoE) has started implementing the Growth and Transformation Plan 2011-2015 (GTP). The 41% electricity access coverage as a baseline for the year 2009/10 is already indicated on page #36 and #72 of the GTP document. The detail can be seen in the following web site: http://www.mofed.gov.et/English/Pages/Home.aspx On page #14 of the SREP IP, it is also specified that the GTP envisages increasing the customer base of the Ethiopian Electro Power Corporation (EEPCo) from the current level of 2 million to 4 million and the general access rate from 41% to 75% by 2015.
2	What is your targeted electricity access for Ethiopia in 2030 (or similar timeframe)? Please detail the investment plans, notably including the secured financing, that are foreseen to achieve this objective.	Switzerland	As mentioned in answer #1 above, the existing national plan targets 75% grid access rate by 2015. The GoE has a plan to reach 100% of electricity access before 2030. To fulfill this target, the rural electrification program is implemented using on-grid and off-grid electric expansion programs. The grid expansion has been, and will continue to be, financed largely from the pubic treasury and from Multilateral Development Banks (MDBs), mainly African Development Bank (AfDB) and the World Bank (WB) and other bilateral funds such as the Kuwait Fund. The off-grid rural electrification program is done by private investors, including rural communities, cooperatives and Small and Medium Enterprises (SMEs). The GoE has established the Rural Electrification Fund (REF) to implement the off-grid electrification program.
3	Please confirm that the planned grid-based investments (geothermal and wind based) are destined to the national electrification and not for export.	Switzerland	From a technical and practical perspective, it is impossible to isolate which kWh of energy from which power plant is being used by which consumer when the sources and targets are part of an interconnected grid network. Ethiopia has identified its overall electricity demand growth, which is based on the electricity demand growth of its domestic and export markets. Correspondingly, it has also prepared its generation expansion program to meet its expected electricity demand. The purpose of the geothermal and wind projects is to show the technical and financial viability of long-term geothermal and wind power development in the country, thus opening the way for the sustainable improvement of the energy mix of the national grid by reducing over-dependence on hydro power, and consequently achieving a degree of climate resilience for the national power system. Thus the goal of using SREP funding for grid connected renewable energy projects is to unlock the future potential of the sector which would diversify Ethiopia's energy generation mix and promote private sector investment in the sector which will have long-term benefits for reducing energy poverty in Ethiopia. Moreover, export of electricity and domestic access expansion are not

			opposing activities and can/should be organized in parallel. Since Ethiopia has surplus energy today due to its ample hydropower resources, generating export revenues from it helps in providing additional financial resources for the expansion of domestic access.
4	Please detail the proposed cost reduction by 55% through private sector involvement for local wind power equipment by notably disclosing the study on which these projections are based.	Switzerland	The two wind farms under construction in Ethiopia are being developed mainly with bilateral sources of finance and are using almost fully foreign technology inputs and human capital. Though construction is still under progress, the expected unit cost per kWh is expected to be above USD 0.10, way beyond the average generation cost in the country. On the other hand, preliminary studies by private companies already active in the sector (e.g. NEFAS (German Co) and dVentus Technologies (USA based co.)), have shown potential to produce locally more than 50% of the technology needed. Another gain relates to the cost savings associated with transportation and other logistics which at present constitute a significant portion of the cost profile, given Ethiopia status as a landlocked and highly mountainous country. Assuming the Assela Wind Farm will have an installed capacity of up to 100 MW, the cost savings can reach more than 20%, depending on the exact set of technologies to be locally procured. Should the local manufacturing be established, preliminary calculations show that the 800 MW targeted by the GoE in the GTP can benefit from as high as 50% cost reductions. Thus it can be said that the development of a successful local wind energy industry and overall significant local value added are pre-requisites for the development of Ethiopia's wind power potential.
5	Would the Government of Ethiopia be ready to give a concession (or other form of PPP) for the Assela Wind Farm project? If not, please explain why.	Switzerland	The aim of the Assela Wind Farm Project is to demonstrate the long term financial affordability of wind power development in the Ethiopian context through the build-up of local manufacturing capability. Providing a concession "or other form of PPP" for a given project involves detailed planning and a synchronized approach by different ministries and stakeholders, as the responsibilities and impacts of a PPP to Ethiopia would not be limited to the MoWE and EEPCo only. It is vital that the utility (the natural off-taker of on-grid IPPs) has the capacity and learns by doing mainly, due to the take-or-pay nature of PPAs signed between IPPs and the off-taker, in which the former's responsibility ends at the substation level. This is, in case the off-taker is not able to give the best use to the energy generated by the IPP, the market risk lies entirely with the utility and this can pose a significant financial responsibility to the GoE. To this end, EEPCo still needs to improve its capacity before entering into PPAs with IPPs. Another issue is the cost levels associated with wind technology, at the moment

			prohibitive for large scale expansion given the other sources of energy in the country (hydro).
6	Would the Government of Ethiopia be ready to give a concession (or other form of PPP) for the AlutoLangano Geothermal Project? If not, please explain why.	Switzerland	The purpose here is to demonstrate the existence of the potential and the technical feasibility of developing geothermal energy. This is best achieved with the public sector, especially in view of the associated risk and time frame for project implementation. It should be noted that, the Aluto Langano Geothermal Plant will be the first significant geothermal power plant in the country. The GoE has the intention of making this field a training center to enhance the national capacity to execute similar projects in other sites of the country by both the public and the private sector. This will add value to the local components of similar projects in the future and thus reduce costs and increase economic viability of geothermal projects in the country. The Long-Term Geothermal Strategy that will be financed by the SREP will focus on clearly defining options for how geothermal assets can be developed, including leveraging the private sector strategically as a source of expertise, project management, equipment supplier and financiers. Please see also answer #5 above.
7	Ethiopia indicated during the meeting that the financing needs for geothermal development are primarily a question of time (urgency). Would the Government of Ethiopia (or the concerned executing agency) be ready to reimburse the SREP funds used with priority for the geothermal development so that they can be reused for other projects, notably an allocation to the SME capacity building and financing facility (component III)?	Switzerland	SREP funds will be used for drilling appraisal and production wells for the Aluto Langano Geothermal Project which could increase the sites power generation capacity from currently planned 35 MW to 75 MW, as suggested by a study completed in 2011 that was financed by the Government of Japan. At present, financing for this type of investments are not forthcoming from private sector in Ethiopia as the countries geothermal risk profile is relatively new. SREP funds will be used to bridge the financing gap required to confirm resource potential of this power plant, which can have a long term demonstration effect for Ethiopia Geothermal sector. Furthermore, the financing needs for the proposal geothermal will act as a risk mitigation instrument that will directly reduce the GoE's direct exposure to drilling risk and allow the project to move on to the stage of power plant development. To this end, the funds cannot be reimbursed.
8	Ethiopia and IFC have both declared that the SME sector has sufficient means for its development (component III). Please support these statements through evidence.	Switzerland	The clean energy sub-sector, especially the clean cook stoves sector has up to now only micro level actors participating in the production, distribution and service provision. Preliminary assessments done by IFC have shown that there will be a limited number of players to be candidates for the small and medium level scale of operations, individually using at least USD 100,000 from the facility. This will limit the rate of utilization of the facility in the short to medium term. There are also other initiatives targeting the sector like the Fuel to Waste project funded by the Nordic Climate Facility and the Nordic Development Fund targeting SMEs operating

			in the access-to-energy sector. the existing GoEs Cook Stoves Dissemination Program and the Off-grid Rural Electrification Fund with its primary focus, through experience, of the provision of solar technology solutions to off-grid areas. These initiatives provide for increased participation for both the public and private sector in the supply of clean energy products. These programs and activities are funded from various sources including the WB, GIZ, the Netherlands, Norway, etc. as well as from the government treasury. This sector is also one of the future beneficiaries of upcoming initiatives such as the Energy+ and the Infodev's Climate Innovation Centre (with whom there will be a close coordination of activities to achieve maximum synergy). See also answer #14. For a market the size of Ethiopia which is relatively small, the size and target of Component III in the IP is appropriate. Moreover, Component III is expected to leverage SREP funds on a 1:4 basis. This means that an additional USD 8 million will be made available by IFC's own investments and mobilization from local capital markets. In addition to the above mentioned programs, the WB is finalizing arrangements with GoE for a new project (slated for FY 2012) which would provide access to finance for any renewable energy and energy efficiency programs in Ethiopia (solar lighting, improved cooking, etc.). This special USD 40 million credit facility will be hosted by the Development Bank of Ethiopia (with support of MoWE) and will be exclusively targeting private sector development. The facility will be available for private sector participants to promote supply side activities as well as for households through a network of Micro Finance Institutions to facilitate demand. The WB concurs with the GOE's assessment that the current plans provide sufficient means for development of the private sector in the renewable energy sector.
9	Switzerland notably asks Ethiopia to carefully reconsider the reallocation of additional funds to component III, with a special emphasis to support SMEs already successfully active in renewable energy sector, since this component best addresses the involvement of the private sector and the alleviation of energy poverty (access to energy by the poor in rural areas), which are important objectives of the SREP and high priorities for Ethiopia.	Switzerland	Please see answer #8. Based on the details provided, the Ethiopian National Team and MDBs would recommend against re-allocation of the resources embedded in the current IP. Furthermore, the SREP fund is leveraging funds from other sources so the suggested reallocation has minimum value added. The current allocation in the IP was determined following a consultative process.
10	With a focus on two large scale projects (geothermal development and wind park) and a proposed allocation of 92% of the maximum available SREP funds to the latter, the Investment Plan fails to directly address the key objective of poverty alleviation through increased access to renewable energy in particular focus on rural areas.	Switzerland	The SREP allocation for the Assela Wind Farm Project is capped at USD 20 million, which corresponds to 40% of the total SREP allocation to the country and not 92%. As per the Independent External Review, the SREP Ethiopia IP *"complies with the principles, objectives and criteria as specified in the design documents and programming modalities".*

			Ethiopia is currently implementing the Universal Electricity Access Programme (UEAP), with the support of MDBs. Even though wind and Geothermal projects are relatively large scale development, the projects will provide additional generation form renewable sources to the national grid, indirectly supporting the electrification program and access to electricity and meeting one of the objectives - poverty alleviation. Furthermore, the ongoing radical expansion of the grid that will provide access to electricity to 75% of the population by 2015,will bring associated socio economic development to the areas covered through the provision of cheap renewable electricity for large scale economic and social activities as well as for domestic lighting and other needs. This reveals the immense effort the GoE has put in energy access, not only in rural but also urban areas.
11	The use of the Financing Facility should be driven by the focus on removing barriers to the large scale deployment of proven RE technologies, such as those mentioned in the Investment Plan. The Government of Ethiopia should support this deployment by the creation of an enabling environment on an institutional, fiscal and regulatory level. Thereby attention should be given to the fostering of nascent economic sectors (such as the solar industry) and the creation of jobs at micro level.	Switzerland	Comment taken. The removal of barriers and addressing of the public and private institutional structures for the sector as well as capacity building and provision of affordable financial services to energy SMEs are the objectives of this IP component. The objective of this project is to provide the sector with affordable financial services. The financing facility will be driven by the focus of removing market barriers. The key barrier for SMEs is access to finance as local banks are not willing to lend to Clean Energy SMEs since they are unfamiliar with their products and have little or no prior experience of lending in this sector (apart from high interests and collateral above 100%). Another key market barrier is the lack of skills from both the commercial lenders and SMEs which the Project Preparation Grant is expected to tackle through capacity building. This grant will also further assess the needs of the sector for subsequent action.
12	With regards to electrification in remote areas, we believe that Solar PV applications are a good alternative to provide access to electricity. In a country like Ethiopia, access to electricity is still a high priority and the impact on education as well as access to information and communication technologies is at least as important as the employment effect of factories. Because of the high costs involved, a grid based system may therefore not be the best solution for the electrification of rural and remote areas. We would support a program seeking to install off-grid solar systems to households, whereby productive use is emphasized by proposing larger systems to small enterprises and using synergies with the electrification	Switzerland	The expansion of the generations, transmission and distribution systems of Ethiopia obey the principle of least cost development as reflected in the Ethiopian Power System Master Plan of 2006 and respect the Government's strategic view of extend the grid to remote areas. There are a number of benefits (e.g. economies of scale) in pursuing this strategy due to the high concentration of hydro power in the country's energy mix. Nonetheless, there is a number of micro and small and medium enterprises (private sector) involved in the dissemination of both solar home systems and improved cook stoves across the country. Finally, please refer to answer #8, in addition to allocation of USD 40 million in the proposed project to promote Solar PV applications along with other energy efficient products, The WB has provided more than USD 30 million through its ongoing projects to promote Solar PV in rural areas of Ethiopia.

	of community buildings (schools, hospitals, administrations).		
13	As Ethiopia already has two wind parks (Ashegoda and Adama) under construction and partially operational, the demonstration of feasibility should already be achieved. The next step clearly is the involvement of the private sector, one of the SREP objectives. We recommend for component II (Assela Wind Farm), the involvement of a private developer is considered and that SREP funds allocated to the project shall be used to finance a mechanism to sustain a reasonable feed-in tariff, if necessary, rather than for a capital buy down. We understand that the consideration of a Public Private Partnership involves additional needs for technical assistance. This may be funded by the SREP and/or MDB facilities (e.g. PPIAF).	Switzerland	The two wind farms under construction may show the technical feasibility of wind power development in Ethiopia, but with their associated costs levels it will be difficult to move ahead significantly with the amount of wind power development envisaged. The main purpose of the AsselaWind Project is technology transfer through private sector local manufacturing, which has a significant impact on the reduction of wind generation cost and this will expedite the development wind resource in the country. Please see also answer #4 and # 5. Furthermore, the feasibility of the wind option is only partially achieved (construction level). The demonstration of feasibility of wind, or any other new source of energy, is only fully achieved by looking as well at the operations stage and how the wind power will interact with the transmission and distribution systems in the country. At the moment, the GoE in cooperation with a huge multitude of stakeholders is working on its first Feed-in-Tariff Law that will cover a number of different renewable energy technologies, including geothermal and wind. The feed-in tariff structure will be such that no other subsidies shall be needed to make PPPs commercially viable. In this context, the SREP resources would neither play a catalytic nor an innovative role. The difference between a subsidy for a Feed-in-Tariff Law and a capital buy down is that for the first, the public subsidy is given to a private company that will pass through the linked benefit to the off-taker (EEPCo) while for the second, the subsidy is directly given to the utility and contributes to ensure the cost effectiveness of the project. In this sense, the option for the capital buy-down is, at the moment, seems to be the most appropriate one to Ethiopia.
14	As highlighted in the SREP sub-committee in Nairobi, our major concern is with the SME component of the Investment Plan and the potential for duplication with a proposed Ethiopian Climate Innovation Centre (CIC) being set up by InfoDev. Both the capacity building and financing aspects for the SME component appear substantially similar to the CIC. We would be grateful if the implementing partners of the SME component (IFC/GoE) could set out: (i) how these two initiatives are distinct and different; (ii) particular how the capacity building and financing aspects differ, and; (iii) if there is any overlap how the SME component could either be redesigned in these areas or how the CIC can help take forward these elements of the SME component, so	UK & Australia	It should be noted that the two programs (Climate Innovation Centre (CIC) and Component III in the SREP IP) target different segments of the private sector. On the project financing side, the CIC seeks to provide risk capital for early-stage companies, while the SREP Clean Energy SME program/facility seeks to target more mature companies with more established businesses and a balance sheet that allows them to absorb competitive lending. This component will be implemented by private commercial banks to finance these companies. The SME component of the SREP IP specifically targets capacity building and financing SMEs active in the production, distribution and servicing of: i) energy access devices (improved cook stoves, lighting devices, solar home systems);ii) efficient energy conversion systems for institutions (institutional cook stoves, solar water heaters, rooftop solar systems); and iii) modern fuels (biomass briquettes, sustainably-produced charcoal), while the proposed CIC has a scope of proposed services much wider than that of the SME

	transaction costs are not duplicated so UK funding represents value-for-money.		component of the IP. The priorities for the CIC will be in order of their importance: (i) sustainable agribusiness, (ii) bio-fuels and biomass, (iii) transportation technologies, (iv) micro-hydropower, and lastly (v) energy efficiency. Furthermore the CIC expects to build specializations in one or more of these sectors to achieve a critical mass of expertise and impact. Since both programs are at their design stage, there is a clear opportunity to coordinate the efforts and resources of the two programs to achieve complementarily and maximum synergy. On the capacity building side, the CIC will provide support directly to SMEs and although there is some overlap here with the SREP IP component #3, this work can be coordinated to ensure that there is no duplication. IFC and Infodev teams have already begun discussions on this issue. Moreover, capacity building in the SREP SME component is also aimed at local banks upgrading their ability to assess the risk of lending to Clean Energy SMEs. The CIC does not address this point.
15	Can the GoE expand on the extent to which SREP investments proposed will be transformational within the context of the country's national strategy? SREP is meant to catalyze a transformation in the renewable energy sector. Particularly for the wind projects there are already two wind farms being developed in Ethiopia. In what ways are the SREP projects helping initiate broader transformation, particularly to enable the private sector to support Ethiopia fully deliver against its wind potential?	UK & Australia	The interventions proposed in the SREP IP will help reorient the traditional energy situation in the country, namely over dependence on hydropower in the electricity sector and traditional utilization of biomass to meet the biggest portion of national energy demand. Ethiopia is at a turning point in its overall development, towards a sustainable climate-resilient green growth pathway, and the SREP will play a vital role in unleashing the country's varied renewable energy potential. The major barrier for wind power development in Ethiopia is its high cost compared to both hydro power and geothermal energy. By showing that with a significant local manufacturing input the costs will be competitive with established technologies for Ethiopia, the proposed wind power project will pave the way for the large scale deployment of wind farms in the long term, be it publicly or privately implemented.
16	It is very helpful to see the Geothermal Sector Strategy being developed as the second component of the Geothermal project. However, it would be useful to see this as part of a broader and comprehensive energy strategy. To what extent will the revised National Energy Policy mentioned at the sub-committee meeting provide this broader energy strategy?	UK & Australia	Comment taken. The Long-Term Geothermal Strategy aims to enable helping GoE defining how the country's geothermal assets can be developed in the future, particularly focusing on what roles the private sector could play. The revision of the National Energy Policy will take stoke of the current energy situation and potential development scenarios on both the demand and supply sides, with the intention of guiding the future path of development of the energy sector in broad terms, and where necessary, accommodating the need for energy subsectors (e.g. geothermal) to have more specific strategies as needed. It is also intended to be a "live" guiding policy document with more frequent reviews and revisions.
17	With respect to carbon savings and additionality, the proposed benefits of the IP would predominately come from displacing biomass (88% current levels). These benefits could be substantial, but it would be good to see the detail of the calculation of benefits to properly assess	UK & Australia	Comment taken. The proposed benefits will be calculated during project appraisal.

	the cost effectiveness		
18	The investment plan (IP) notes that Ethiopia has attracted some private sector investment in geothermal projects that are currently at the early stages of development. However, the geothermal and wind projects in the IP (AlutoLangano and Assela) currently do not contemplate any private sector investment. a. Please describe in more detail how staff developing the IP concluded that private sector investment in these two projects was not feasible. b. Please also describe whether any consideration was given to encouraging greater private sector involvement in these projects over time (e.g. by encouraging private takeout financing of one or more of the governmental entities' stakes in the projects). c. Going forward, we would like to see all investment plans devote more discussion to how the proposed plans maximize private sector participation, subject to the relevant constraints on doing so, and how the plans are structured to encourage greater private sector involvement over time.	USA	a. Please see answers #5, #7 and #13. b. The SREP Ethiopia IP includes two components that will encourage private sector. These include (i) Component #3; and (ii) the Long-Term Strategy for the Geothermal Sector. On another point, once geothermal and wind power are proven as viable for the power sector, development of subsequent projects will be possible by IPPs (The Long-Term Geothermal Strategy will provide further guidance on how to achieve that in the geothermal sub-sector). c. Comment Taken.
19	Please describe in more detail whether and how the public benefits anticipated from the Assela wind farm project will differ from the benefits derived from the other wind projects already under development in Ethiopia. Please also provide a more complete discussion of the potential for this project to bring down the cost of wind projects in Ethiopia (e.g., by seeking to quantify, to the extent practicable, the potential range of cost reductions that could be expected to result from this project, and how the resulting costs compare with the cost of competing technologies in Ethiopia).	USA	Please see answer #4 In Ethiopia, one of the main barriers, linked with the installation of wind farms, is still the high capital expenditures (CAPEX) and the transportation costs. One can still argue that in terms of operations & maintenance, wind technology is more competitive when compared to other traditional sources of energy. Nonetheless, the pressure of the high up-front capital is still considerable and only with very attractive financing schemes these projects make sense in the Ethiopian context. It is important to mention that, from an economic stand point, wind generated energy is one of the last types of power to be dispatched to the end users due to its intermittent nature (still requires a back-up solution to ensure the continues flow of energy in the system and is not a base load facility) and high cost. The fact that Ethiopia relies mostly in hydro power (94%) and it has one of the lowest generation costs per kWh in the World does not contribute to a different situation.

			Therefore, the only way to make this type of energy feasible is through below market terms financing (e.g. concessional loans/grants) and through the stimulation of local industry (e.g. economies of scale and reduction in transportation costs). At the moment, it is not possible to determine with very high precision on the potential that this project has to bring down cost of wind projects. This will only be possible when the inputs are priced and its source location determined. The same will apply to the cost of financing. For information, the Ashegoda and Adama projects are benefiting from significant levels of grant financing from the French and Chinese governments. Only during appraisal of the Assela Wind Farm Project and during supervision missions, the analysis requested can be done with a small degree of error.
20	A key element of the transformative role of SREP is the removal of barriers for scaling up (private) sector investment in renewable energy. From the investment plan and discussion in Nairobi, we understand that Ethiopia proposes to pursue mobilization of public rather than private sector investment for the subsectors wind and geothermal. It is unclear to us how this will be done. We therefore welcome further explanation of the Ethiopian strategy to mobilize the needed long-term investments for the subsectors wind and geothermal, and to clarify the feasibility and risks of this strategy.	Netherlands	Please see answer #6, #7 and #18 above. The SREP IP proposes to develop two infrastructure projects, one in geothermal and another in wind. at this early stage of the exploitation of these resources in Ethiopia. Once these resources and technologies are established in the country, in the long term the expectation is there can be both public and private investments to develop these resources.
21	In relation to the component of SME development, we note that the Netherlands has supported work in Ethiopia in the subsectors domestic biogas, improved cookstoves and decentralized rural electrification with solar PV and micro hydro. It is unclear to us which subsectors will be selected for SREP support and how the proposed SREP investment will build on earlier work and experiences by a.o. SNV/HIVOS and GIZ. We understand that, during implementation of their programs, barriers have been encountered in the cooperation between SMEs and different government institutions. We therefore welcome further clarification of the role of the Government of Ethiopia in this component. How does the Government of Ethiopia plan to provide policy	Netherlands	The GoE is dedicated to build a green economy and the production and dissemination of clean energy technologies that help improve energy access is given a high priority. The GoEis ready to give a consistent and strategic guidance to achieve a massive role out of these technologies. To this end a national Climate Resilient Green Economy Strategy (CRGE) has been issued and preparations are underway to strengthen the national institutions to achieve the required results. It is useful to highlight that the CRGE has been developed in consultation with a wide range of stakeholders such as SNV, GIZ, Korea, etc. The design of the project includes lessons learned from the experiences of past interventions and includes measures to remove barriers to entry for private sector participation in renewable energy and energy efficiency sector. Furthermore, the Project Preparation Grant related to Project #3 of the IP will be used to analyze the existing situation, barriers encountered so far, and future arrangements. It will also come up with more concrete recommendations as to if or which technologies will

	guidance to the transformative changes? Will there be a further process of identification of policy barriers that currently exist between the Government and the SME sector? Will the Government take on a leading role to address these barriers? If available, a muilti-stakeholder vision or roadmap for transformative change in the selected subsectors would be helpful.		be prioritized in the implementation phase of the project from the ones proposed at the concept level in the IP.
22	**Well integrated in own plans concerning low-carbon development path.** We commend and congratulate the efforts of Ethiopia in developing its Investment Plan. Ethiopia stands out in its dedicated and path-breaking effort in terms of pursuing a low carbon development path. The Investment Plan is well established within the context of Ethiopia's own development plans and priorities – referring extensively to its own governing plans and goals within its Growth and Transformation Plan, its Climate Resilient Green Economy Strategy and its NAMA. In particular, it would appear that the SREP contribution is envisioned as playing a central role in helping the Government achieve 10% generation from non-hydro. The Investment Plan targets both geothermal and wind development, the two main sources of generation, besides hydropower. The Results Matrix is of high quality. Finally, it is a positive sign that the SREP contribution is dedicated 100% to investment projects, implying that the GoE would appear to have the intent to cover administrative costs associated with the program.	Norway	Agreed.
23	**Geothermal Component.** Specifically, we are favorable to the inclusion of the geothermal sector strategy component, in cooperation with the IFC, within the Geothermal pillar. We are also positive to your intention to develop your geothermal resources through the Aluto Langano Geothermal project. However, we note that there is a financing gap that has to be addressed and we will ask Ethiopia whether they could foresee a potential role for the private sector in filling that gap. Further, we would have liked to see more elaborated how Ethiopia intends to involve geothermal technology providers/expertise in implementing the project. Given that the development of geothermal still confronts many challenges, technology providers with commercial	Norway	Geothermal potential investigations have been going on in Ethiopia for many decades and there is already a small pilot geothermal plant operating at Aluto Langano for some time now. Through all this the country has been acquiring knowledge, expertise and resources (drilling rigs, laboratory, etc) and activities are already underway at the site for the drilling of additional appraisal wells. This puts the public sector in the driving sit to implement this first major geothermal power plan in the country, thereby reducing the overall risk of developing geothermal resources in the country. Concerning the private sector, the GoE has engaged with Reykjavik Geothermal and based on the experience and lessons learned from this engagement will consider on how to engage with private sector in the future. It is important to state the country's commitment to the development of both geothermal and wind. In this regard, being the SREP an important program to Ethiopia and the fact that the IP is the result of coordinated actions between the MoWE, MoM, MoFED, MDBs

	interests can be instrumental in overcoming critical hurdles during implementation.		and other relevant stakeholders, the country will do its best to ensure financing for the projects from a wide range of financiers. The GoE does not foresee private sector participation in the Aluto Langano Project. Please also see answers # 5 and #6. Geothermal development requires drilling technology and power plant technology. Both of these are proven technologies and are available on commercial basis in the market. As part of the project development, these technology providers will get involved with the implementing agencies in order to assess the sight potential and later develop the power plant. In the existing project EEPCo has selected the technology providers through a competitive process and similar policy will be followed when scaling-up under the SREP Funds.
24	**Very much in support of the Clean Energy SMEs Capacity Building and Investment Facility component.** However, we know that there are many other initiatives in the same field. We hope that all of these initiatives are well coordinated and that they in fact may provide a good opportunity to test and determine which modality is most appropriate for scale-up	Norway	Please see answer #14.
25	**Applaud GoE for inclusion of gender equality in prioritization of projects.** The Norwegian delegation applauds the central role awarded to gender considerations in the IP, having listed "Gender Equality Promotion" as one of the seven prioritization criteria in selecting the SREP target interventions.	Norway	Agreed.
26	**See a mismatch in background and analysis (rural energy) and interventions (grid connected).** We commend the emphasis of the analysis in the Investment Plan on rural energy needs. We are therefore puzzled by the fact that 46 out of 50 million is targeted at on-grid RE from the Aluto Langano Geothermal Plant and the Assela Wind Farm, and, based on the Investment Plan, it would appear that a substantial amount of this may be exported. However, the GoE assured the sub-committee that this generation is meant for domestic beneficiaries. Norway would request some documentation to this effect. More generally, Norway would have appreciated a presentation of the ongoing electrification efforts in the country. Given that nearly the entire SREP contribution	Norway	As mentioned above, from a technical and practical perspective, it is impossible to isolate which kWh of energy from which power plant is being used by which consumer when the sources and targets are part of an interconnected grid network. Ethiopia has identified its overall electricity demand growth, which is based on the electricity demand growth of its domestic and export markets. Correspondingly, it has also prepared its generation expansion program to meet its expected electricity demand. In terms of ongoing electrification efforts, the existing national plan targets 75% grid access rate by 2015 and the GoE has a plan to reach 100% of electricity access before 2030. For more information, please see answers #1 and #2.

	is to on-grid electrification, one could have expected insight as to; recent successes/failures to expand the grid, current barriers to further expansion, current financing situation in expanding the grid, realistic prospects behind the Universal Access program.		
27	**Positive to ambitions concerning wind power, but have difficulties in seeing the transformational impact of the SREP contribution.** We are positive to Ethiopia's ambitions to develop their wind sector. However, the demonstration effects of the Assela Wind Farm are less obvious to us, as this is a simple capital buy-down for a relatively mature technology within a publicly owned utility. However, we note with interest that Ethiopia is planning to implement a FiT for the wind sector. Thus, we would propose to Ethiopia to look into the possibility that the SREP contribution could be used to set up and implement a FiT for the Assela Wind Farm. If so, the SREP contribution would truly be innovative in the Ethiopia context and may have a demonstrational effect for this planned support mechanism, and as such fully in line with the SREP guidelines and intentions. Regardless, we would request that GoE explains why they are requesting a capital subsidy for Assela when their own preferred policy instrument for grid-connected wind is a FiT?	Norway	Please see answer #5 and #13. Although important, the Feed-in-Tariff Law currently being developed will not be Ethiopia's major policy instrument for grid-connected power plants. Moreover, the current Feed-in-Tariff Law will have upper limits in terms of technology and installed capacity. Given its pilot nature, testing it on a Wind Farm with a size of 100 MW is counterproductive and riskier.
28	**Substantial unresolved financing issues in completing the individual packages.** On the face of it, it would appear that both the geothermal and wind projects still have significant financing gaps. More than 50% of the geothermal project financing is designated as "others", as is some 20% of the wind project. Not only are committed financiers for these sums not yet identified, the Investment Plans claims that donors (rather than investors) will be approached to fill the remaining gaps. These sums of money are significant for individual donors, and likely far from certain. We would request the GoE to explain why private/commercial capital cannot play a role in the financing of these two projects. Specifically, even if they are to be publicly owned, could export credits not be an option?	Norway	Given the way SREP is designed, and the fact that all projects are at early stages of development, at the moment it is impossible to avoid financing gaps. Even the MDB co-financing is contingent on GoE prioritization of IDA and ADF resources for the next cycles. Nonetheless, it is important to state the country's commitment to the development of both geothermal and wind. In this regard, being the SREP an important program to Ethiopia and the fact that the IP is the result of coordinated actions between the MoWE, MoM, MoFED, MDBs and other relevant stakeholders, the country will do its best to ensure financing for the projects from a wide range of financiers, including export credits as an option. Since an IPP is not the path the GoE foresees for the development of the Aluto Langano Geothermal Project (see answer #6), should a gap in financing materialize, the GoE will pursue other viable financing options, including using additional public resources.