

Ministry of Foreign Affairs – (Department for Growth and Employment, VBE)

Meeting in the Council for Development Policy 12 April 2018

Agenda item 2

- | | |
|---|---|
| 1. Overall purpose | For discussion and recommendation to the Minister |
| 2. Title: | Danida Business Finance: Assela Wind Farm Project, Ethiopia, 2019 -2021 |
| 3. Presentation for Programme Committee: | 10 November 2017 |



Danida Business Finance

Assela Wind Farm Project

Ethiopia






2019 -2021

24 February 2018

File number: F1744-01

UM file number: 2018-14197

Assela Wind Farm Project, Ethiopia

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| <p>Key results:</p> <ul style="list-style-type: none"> - A 100 MW wind farm installed delivering on average 330 GWh of electricity a year to the national grid avoiding the release of 175,890 ton of CO2 annually. - Diversification of Ethiopia's energy mix helping mitigate against risk of climate events that impact hydro power. - Improved capacity of Ethiopian Electric Power (EEP) to operate and manage wind farms. - Mobilisation of private finance through blending. <p>Justification for support:</p> <ul style="list-style-type: none"> - The Government of Ethiopia has a goal to become a middle-income country by 2025 based on carbon neutral growth. Developing renewable energy sources is central to this. - The Government of Ethiopia wants to avoid excessive dependence on hydropower during recurrent national drought. Hence, wind energy is important (together with solar and geothermal energy). - Political risk, inadequate regulatory framework and low tariffs in the Ethiopian energy sector makes the wind sector too risky for private investors and therefore wind projects cannot be financed on commercial terms. - The promotion of clean energy is a central objective of Denmark's development policy. Denmark has strong competences in wind. By using development aid for investments in wind energy, linked to an ongoing Danish support programme in the sector, the project can build capacity and contribute to the creation of a commercial wind energy market. <p>Major risks and challenges:</p> <ul style="list-style-type: none"> - At present Ethiopia is not able to optimize inputs from different energy sources in the grid. An on-going Danish support with the participation of Danish energy authorities aims at helping Ethiopia to overcome this challenge. - EEP has some, but limited capacity to operate wind farms. Solid training, 5 years technical assistance and spare parts on top of the 2-year guarantee period will mitigate the risk that capacity of EEP is insufficient. - The land acquisition and compensation process could be delayed and/or consultation and compensation to affected people be inadequate. To mitigate this risk, technical assistance will be provided to EEP during the tender and construction phase to ensure adherence to IFC standards. | <table border="1"> <tr> <td>File No.</td> <td colspan="6">F1744-01/F2 2018-14197</td> </tr> <tr> <td>Country</td> <td colspan="6">Ethiopia</td> </tr> <tr> <td>Responsible Unit</td> <td colspan="6">Danida Business Finance</td> </tr> <tr> <td>Sector</td> <td colspan="6">Energy Sector – Renewable Energy</td> </tr> <tr> <td>Partner</td> <td colspan="6">Ethiopian Electric Power (EEP)</td> </tr> <tr> <td></td> <td><i>DKK mill.</i></td> <td>2018</td> <td>2019</td> <td>2020</td> <td>2021</td> <td>2022</td> <td>Tot.</td> </tr> <tr> <td>Commitment</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Projected ann. disb.</td> <td>5.0</td> <td>200.0</td> <td>160.0</td> <td>160.0</td> <td>202.3</td> <td>727.3</td> <td></td> </tr> <tr> <td>Duration</td> <td colspan="6">24 months construction + 2 years liability</td> </tr> <tr> <td>Previous grants</td> <td colspan="6">0</td> </tr> <tr> <td>Finance Act code</td> <td colspan="6"></td> </tr> <tr> <td>Head of unit</td> <td colspan="6">Morten Elkjær</td> </tr> <tr> <td>Desk officer</td> <td colspan="6">Annelise Bovsen</td> </tr> <tr> <td>Financial officer</td> <td colspan="6"></td> </tr> </table> | File No. | F1744-01/F2 2018-14197 | | | | | | Country | Ethiopia | | | | | | Responsible Unit | Danida Business Finance | | | | | | Sector | Energy Sector – Renewable Energy | | | | | | Partner | Ethiopian Electric Power (EEP) | | | | | | | <i>DKK mill.</i> | 2018 | 2019 | 2020 | 2021 | 2022 | Tot. | Commitment | | | | | | | | Projected ann. disb. | 5.0 | 200.0 | 160.0 | 160.0 | 202.3 | 727.3 | | Duration | 24 months construction + 2 years liability | | | | | | Previous grants | 0 | | | | | | Finance Act code | | | | | | | Head of unit | Morten Elkjær | | | | | | Desk officer | Annelise Bovsen | | | | | | Financial officer | | | | | | |
| | File No. | F1744-01/F2 2018-14197 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Country | Ethiopia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Responsible Unit | Danida Business Finance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Sector | Energy Sector – Renewable Energy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Partner | Ethiopian Electric Power (EEP) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <i>DKK mill.</i> | 2018 | 2019 | 2020 | 2021 | 2022 | Tot. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Commitment | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Projected ann. disb. | 5.0 | 200.0 | 160.0 | 160.0 | 202.3 | 727.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Duration | 24 months construction + 2 years liability | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Previous grants | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Finance Act code | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Head of unit | Morten Elkjær | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Desk officer | Annelise Bovsen | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Financial officer | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Relevant SDGs | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  <p>Affordable Clean Energy</p> | |  <p>Decent Jobs, Economic Growth</p> | |  <p>Industry, Innovation, Infrastructure</p> | |  <p>Climate Action</p> |  <p>Partnerships for Goals</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Total project budget: DKK Million 1,264.7 Of which DBF financing: DKK Million 1,260.2</p> <p>DBF total grant commitment, including budget margin: DKK Million 727.3</p> <p>Concessionality: 50%</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Strategic objectives:

The project would contribute to the Government of Ethiopia's goal of increasing renewable energy generation capacity, diversifying the energy mix and increasing access to electricity for the Ethiopian population. The project will also serve as an illustration of state-of-the-art wind power technology and hence contribute to increasing the acceptance of wind power in the country, where there is a big potential.

Justification for choice of partner:

Although several development partners are helping EEP develop a framework to engage Independent Power Producers (IPP) in the future expansion of capacity, EEP is still the only producer of electricity in the country. EEP is therefore a natural partner for the present project.

Summary:

The Government of Ethiopia's second Growth and Transformation Plan (GTP II – 2016-21) sets a goal of becoming a middle-income country by 2025. This will require development of the energy sector. Production of energy is almost entirely based on hydro-power. To make the energy sector more resilient to climate change, the Government of Ethiopia wants to diversify the energy mix and include other renewables such as sun, wind, geothermal and biomass. Ethiopia's potential is huge and would permit the country not only to provide for its own population, but also to export to neighbouring countries. Apart from the construction of new electricity generation capacity, a big challenge is to secure access for the population, as only around 27% of the households are presently serviced. The present phase of the Universal Electricity Access Program aims at achieving universal access by 2025.

The present project aims at supporting the Government of Ethiopia in the expansion of the generation capacity based non-hydro renewable sources to avoid excessive dependence on hydro-power, by financing a 100 MW wind farm at Assela, around 100 km south of the Capital, Addis Ababa. The project will be tendered among wind energy companies based in Denmark and will be financed by a soft loan from Danida Business Finance with 50% concessionality.

Budget:

| | |
|---|--------------------------|
| Output 1. 100 MW wind farm tendered and built at Iteya, including a substation and connection to the national grid. | DKK mill 1,233.5 |
| Output 2. 20 EEP staff have received certified training at different levels | DKK mill. 3.7 |
| Output 3. 5 years Technical Assistance and spare parts provided by contractor | DKK mill. 19.3 |
| Output 4. Technical Assistance provided to EEP to manage adequately the process of resettlement and livelihood restoration for project affected people. | DKK mill. 3.7 |
| Total | DKK mill. 1,260.2 |

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1 Introduction

The Ethiopian Ministry of Finance and Economic Cooperation (MoFEC) has requested the Danish Ministry of Foreign Affairs to finance the construction of a 100 MW wind farm via Danida Business Finance (DBF). The wind farm will be located close to Iteya, midway between the towns of Adama and Assela, approximately 150 km south of Addis Ababa.

The Feasibility Study (FS) for the project, financed by the African Development Bank (AfDB), was carried out by the German Consultant Lahmeyer International. The project was appraised by Danida Business Finance in November-December 2017.

Key Data:

| |
|--|
| Project name |
| Assela Wind Farm |
| Country |
| Ethiopia |
| GNI per capita (USD) (2016) : 660 |
| Product |
| 100 MW Wind Farm |
| Implementing partners |
| Ethiopian Electric Power (EEP) |
| Investment type |
| Greenfield |
| Total investment |
| DKK million 1,264.7 (EUR million 170,1) Of which DBF financing: DKK million 1,260.2 |
| DBF grant commitment (incl. budget margin) |
| DKK Million 727,3 |
| Type of financing |
| Soft loan – 50% concessionality |
| Financial net IRR |
| IRR is negative (hence not defined and project not viable on commercial conditions) |

The Ethiopian government has ambitious plans to achieve development through green growth and they are a partner in the P4G Initiative (Partnering for Green Growth and the Global Goals 2030), supported by the Danish government. With the second Growth and Transformation Plan (GTP II – 2016-21) the Government of Ethiopia (GoE) sets a goal of becoming a middle-income country by 2025. The energy sector has a central role in the Government’s development plans, based almost entirely on hydro-power and, to a lesser extent, other renewables (sun, wind, geothermal and biomass). Ethiopia’s potential is huge and will permit the country not only to provide for its own population, but also to export to neighbouring countries.

Access to electricity is still very low (27% of the population). GoE launched in November 2017 a National Electrification Program, which aims at reaching universal access by 2025, using both on-grid and off-grid solutions.

Even if the Government is in a process of opening the sector for private investors, all electricity is presently still generated by the state-owned Ethiopian Electricity Power (EEP) and distributed by the state-owned Ethiopian Electric Utility (EEU). The regulator is Ethiopian Electricity Authority (EEA). Tariffs are approved by the cabinet.

Private investors are reluctant when it comes to investing in the Ethiopian wind sector. Political risk is considered high and the institutional and regulatory framework and very low tariffs make it impossible to generate adequate returns on the investments. Consequently, wind parks are currently financed by donors, in parallel with efforts of building capacity and an improved framework for private investments.

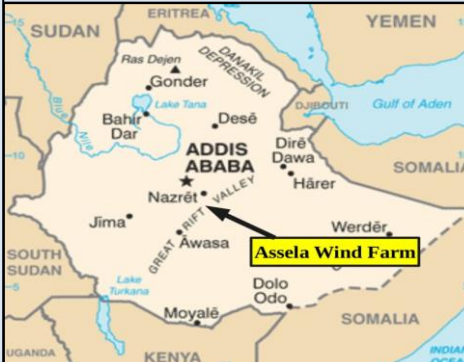
The on-going grant-based Danish support programme to Ethiopia includes a programme for “*Accelerating Wind Power Generation in Ethiopia*”, which supports the integration of wind power into the national grid (using Danish experience). As this is a necessary condition for the GoE to be able to reap the full benefit of the investment, there is thus a good degree of synergy between this support programme and the planned DBF credit.

Several other development partners are active in the energy sector and complement the present project. The World Bank is supporting the GoE programme to achieve universal access to energy and also supports the strengthening of the grid. AfDB and the French Cooperation (AFD) both support the strengthening of the grid and the construction of High Voltage DC power lines to other East African countries, and AFD is supporting the construction of a new National Load Dispatch Centre. Existing wind farms have been funded by France and China. The efforts of developing the energy sector is coordinated in the Energy Sector Working Group in which the Danish Embassy participates.

The 100MW Assela wind farm is planned to be installed around 50km south of the city of Adama. The expected energy output from the wind farm is between 300 and 330 GWh, equivalent of use of electricity for 500.000 households. The projected energy production implies an expected capacity factor between 34% and 38%, which would be sufficient to make the project viable in Europe. The project also includes a substation that will connect the wind farm to the grid. This part will be included in the DBF financed contract.

2 Project Context

2.1 Socio-economic context

| Context | Existing documentation |
|---|---|
| <ul style="list-style-type: none"> Ethiopia is a large, diverse, land-locked country located in the Horn of Africa, with an area of about 1.1 million square kilometers. It is a country of many nations, nationalities and peoples, with a total population of about 90 million (2015). From 2004 to 2014, real gross domestic product growth averaged 10.8 per cent per year, which has helped reduce poverty in both urban and rural areas. Poverty declined according to the World Bank from 55.3 per cent in 2000 to 33.5 per cent in 2011, based on the international poverty line of US\$1.90 per/day. The country's 2016 per capita GNI of US\$ 660 is still very low. Ethiopia is a relatively stable country, although recent political and social unrest shows that Ethiopia still lacks key dimensions of domestic stability. Following the resignation of Prime Minister Hailemariam Desalegn in February 2018 a period of political and social unrest emerged in parts of the country, mainly in the Amhara and Oromia regions, the latter where the Assela project is located. The project site of Assela wind farm is mainly characterized by intensively cultivated land and homesteads and only a small part consists of grassland (grazing area) and natural/ secondary scrubland vegetation. 20-30 families is expected to be directly affected by the project. | <ul style="list-style-type: none"> Feasibility Study (2017) ESIA (2017) Landpolitikpapier for Etiopien, 2018 – 2022 (udkast) Concept note, Country Programme 2018 – 2022 Appraisal of Assela Wind Farm Project, De116.4cember 2017 Accelerating Wind Power Generation in Ethiopia, Thematic Programme Document, October 2016  |

2.2 The electricity sector, institutions and plans

Ethiopia's electricity sector has traditionally been managed by the Ethiopian Electric Power Corporation, the vertically integrated utility, which covered the whole chain from generation to distribution. In 2013, the GoE split the Ethiopian Electric Power Corporation into two public enterprises: (a) the Ethiopian Electric Power company (EEP), responsible for generating, transmitting and wholesale of electricity to be utilized nationwide as well as in neighbouring countries; and (b) the Ethiopian Electric Utility (EEU), responsible for power distribution, sales and implementation of the Universal Electricity Access Program. In addition, a federal electricity sector regulator was established, the Ethiopian Energy Authority (EEA), which replaced the Ethiopian Electricity Agency.

The Ministry of Water, Irrigation and Energy (MOWIE) is responsible for the sector policy, and EEP and EEU are both attached to MOWIE. EEA is responsible for proposing the electricity tariff; however, decisions regarding the tariffs are taken by the Government. Tariffs have last been changed in 2006. According to MOWIE, it is the intention to gradually increase the tariff in the coming years. However, the electricity tariff is a sensitive issue and the present situation with social unrest in the Amhara and Oromia region can make it difficult to adjust the tariff in the short run, despite the lifeline tariff for low consumption households.

The energy sector has a central role in the Government's development plans. The generation capacity will continue to rely exclusively on renewable energy sources - mainly

hydropower. However, according to the GTP II, the ambition is that 15–20 percent of the energy production will come from wind, geothermal, sun and other renewable sources, as hydropower is subject to uncertainty due to increasing variations in seasonal rainfall due to climate change. Given the expected increase in demand for electricity (nearly 10 percent, annually), complementary energy resources must be developed to mitigate the risk of overreliance on hydropower.

Apart from the construction of new electricity generation capacity, a big challenge is to secure access for the population, as only around 27% of the households are presently serviced. Ethiopia aims to reach universal electricity access by 2025 in accordance with the National Electrification Program (NEP) [launched in November 2017] that supports the implementation of strategic priorities for sustainable energy sector development and scaling up electrification defined in the National Electrification Strategy [launched in June 2016]. Achieving universal access by 2025 is probably not feasible but reflects the high priority of the government.

2.3 Renewable energy and Climate change

In the second national communication to the United Nations Framework Convention on Climate Change, it is stated that *“The results for CO2-equivalent emissions and removals clearly indicate that the agriculture and energy sectors are the most important sources of emissions, while the land-use change and forestry sector is the most important with respect to removals.”* As almost all the electricity production is from hydro-power, the energy referred to is mainly fuel wood, used in rural households, and fuel for transport. Land use change is an important contribution to CO2 emissions, but according to the second national communication *“this is now stabilizing following the intensive afforestation and re-afforestation campaigns by the Government.”* Even if Ethiopia is not obliged under the Climate Change Convention to reduce its greenhouse gas emissions, *“it has, however, voluntarily and informed by national development objectives, goals and priorities, designed a Climate-Resilient Green Economy Strategy, which it is now implementing”*.

2.4 Electricity demand and generation capacity

Electricity consumption has been increasing rapidly in Ethiopia. The average compound electricity sales growth of the interconnected system from 2001-2011 was 11.4% p.a.¹ But despite this rapid growth, still only 27% of the population had access to electricity in 2014.

The most recent long-term planning document for the electricity sector is the Masterplan Study from 2014. The Masterplan Study is based on the following projection of demand:

Table 1. 2014 Masterplan demand growth projections (including exports)

| Master plan projection 2012-2037 | Reference scenario |
|----------------------------------|--------------------|
| 2012-2017 ² | 31.6% |
| 2017-2022 | 14.3% |

1 *“Ethiopian Power System Expansion Master Plan Study, Vol I-V”*, prepared for EEP by the international consultant Parson Brinckerhoff. Vol I, Page 2.

2 The Masterplan study is based on data up to 2012. The rest are projections.

| Master plan projection 2012-2037 | Reference scenario |
|----------------------------------|--------------------|
| 2022-2027 | 6.9% |
| 2027-2032 | 6.7% |
| 2032-2037 | 5.9% |
| Average growth 2012-2037 | 12.7% |

The overall growth rate for the whole period does not look off the mark, taking into account the historic growth as mentioned above, and the present very low access rate and per capita consumption, implying that there is a considerable pent-up demand. However, the projected growth rate for 2012-2017 is very high, and the actual demand growth has been considerably lower. The main reasons seem to be that growth in number of customers has been slower than expected, as has the demand from the new industrial parks.

The reference scenario in the Masterplan Study implies that total annual consumption will increase from 4,921 GWh in 2012³ to 96,908 GWh in 2037, i.e. an almost 20 fold increase over 25 years. Peak demand is projected to increase from 1.2 GW in 2012 to 21.7 GW in 2037.⁴

The risk of overcapacity for electricity generation is, however considered to be small. Even if capacity for electricity generation will increase strongly in the coming years, consumption is also likely to increase rapidly as more households get connected and the many new industrial zones start operating. It is commendable that the Government of Ethiopia aims at expanding the generation capacity anticipating the increase in demand, unlike many other developing countries, which are plagued by electricity rationing and blackouts. Lack of access to reliable electricity is a very common bottleneck for development, particularly for industrial development. Furthermore, Ethiopia is constructing high voltage power lines to the neighbouring countries aiming at increasing the export of electricity.

In conclusion, there is no doubt that there is a huge pent-up demand for electricity and that demand will continue to grow as the economy expands, so there is a need to increase the generation capacity in the coming years. The present wind farm project will add 100MW generation capacity, which constitutes around 2.4% of the present installed capacity (and around 0.6% of the capacity projection in GTP II for 2020). From a demand perspective the project is therefore also well justified.

3 Strategic considerations and justification

Previous experience

Ethiopia has presently three wind farms that have been commissioned in recent years: the Ashegoda Wind farm (funded by France) and the Adama I and II wind farms (funded by China). Ashegoda was at the time of commissioning (2013) the largest wind farm in Africa. Consequently, EEP has gained some experience in the planning,

³ For a comparison: Denmark with a population of 5.7 million people had in 2016 an electricity consumption of 33,018 GWh.

⁴ It should be mentioned that peak demand for 2017 was projected to be 4.1 GW, while EEP states that actual peak demand presently is around 2.3 GW.

execution and operation of wind farms, mainly from the Adama wind farms, which are operated by EEP.

The present project is the first experience with DBF financed projects in Ethiopia. There are therefore no prior experiences with DBF finance in the country. Danida has some experience in working with EEP in the context of the “*Accelerating Wind Power Generation in Ethiopia*” programme as mentioned above, which generally is positive.

Strategies and priorities of Ethiopia

The project is a contribution to the GoE’s goal of increasing generation capacity based on renewable energy sources, diversifying the energy matrix so it is less dependent on hydropower only and hence less affected by droughts and at the same time increasing access to electricity for the Ethiopian population. The project will also serve as an illustration of state-of-the-art wind power technology and hence contribute to increasing the acceptance of wind power in the country, where there is a big potential. It will contribute to creating a market for wind energy, which is a sector where Danish companies have a stronghold.

The buyer, EEP, has considerable experience in managing large scale projects, mainly within hydro-power, while experience with wind power is still somewhat limited. Although the electricity tariff is very low, EEP turned out a modest profit for 2014 (around 2 million USD), probably because many of the hydro-power plants are old and hence already depreciated (as the main cost of hydro-power is capital cost). EEP salaries are low, but even so they compare favourably to other sectors.

Development Impact

The project would have significant positive impact on SDG 7 (access to energy equivalent of an estimated 500.000 households), SDG 8 (supporting economic growth and decent job creation during construction and operation of the wind mill farm as well as indirect job creation) SDG 9 (quality, reliable, sustainable and resilient infrastructure), SDG 13 (strengthening climate change mitigation and resilience) and SDG 17 (mobilising private finance and transferring of environmentally sound technologies). Providing households access to power would have additional benefits to households and their member, including cheaper and cleaner access to light, batteries for communication devices such as mobile phones, radio, tv etc.

Danish development policy

The Danish strategy “World 2030” lays out the main lines for the Danida support. Among the four strategic priority areas is “*Inclusive, sustainable growth and development*”, which means that “*Denmark will invest in inclusive and sustainable growth in the developing countries with a special focus on energy, water, agriculture, food and other areas, where Denmark has particular knowledge, resources and interests*”. Climate change and sustainable energy are prioritised areas: “*Together, the Climate Change Agreement from Paris and the Sustainable Development Goals shape the course for increased investments in i.a. resource-effective and sustainable energy and water solutions where Denmark has strong competencies*”.

The project is highly relevant in this context:

- Renewable energy and climate change are central objectives for the Danish international cooperation, and constitute an important part of one of the Danish thematic programmes in Ethiopia in the on-going country programme;
- It is a project that contributes to the reduction of CO₂ and showcases the potential for Wind Energy;

- It increases the capacity of Ethiopia within the area of Wind Energy;

Danida Business Finance eligibility

Regarding the Guiding Principles for DBF: *“Danida Business Finance contributes indirectly to poverty reduction by contributing to sustainable and transformational change in developing countries in line with the SDGs, by softening the terms of commercial loans for investments primarily in public infrastructure. The projects should be based on local demands and development challenges, in line with the partner countries own development strategies and sector plans.”* The present project is clearly within this vision:

- The project is a contribution to the expansion of the generation capacity based on renewable energy sources, thus contributing to the SDG-7 of “affordable and clean energy”;
- It is closely in line with the GoE policy and plans for the development of the electricity sector and in particular the renewable energies;
- It complements the Danida grant support through the thematic programme *“Accelerating Wind Power Generation in Ethiopia”*;
- It contributes indirectly to poverty reduction by providing access to adequate and reliable energy which is important for economic activity and inclusive economic growth.

Institutional and operational sustainability

Even though several development partners, among these Denmark, are helping EEP develop the framework for auctions to engage Independent Power Producers (IPP) in the future expansion of capacity, EEP is still the only producer of electricity in the country. EEP is therefore a natural partner for the present project. Earlier wind power projects by DBF have shown that Danish companies are interested in bidding and that there is price-competition leading to cost-effective projects. Furthermore, Danish companies have shown that they have capacity to implement wind power projects in the developing world, including in Eastern Africa (Turkana Wind project).

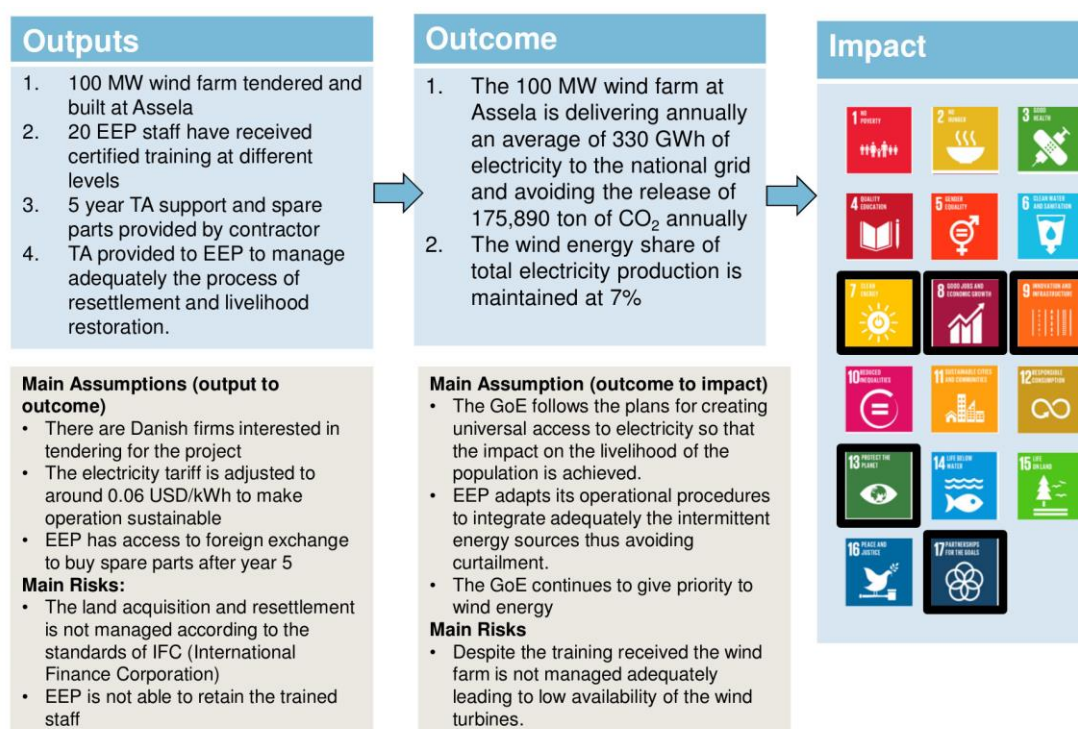
The main concerns related to institutional sustainability are (i) the technical capacity of EEP for operation and maintenance and (ii) the low electricity price which may limit the financial capacity of EEP to maintain the wind farm. A comprehensive training package will therefore be included in the project, as well as a considerable stock of the most important spare parts (for 5 years of operation) and the Danish contractor will be present during a 2-year liability period. As EEP and the energy sector are so central to the development strategy of the country, the risk of the GoE leaving EEP without funds to operate is considered low.

Social and Environmental Impact

A comprehensive Environmental and Social Impact Study has been elaborated as part of the Feasibility Study. The ESIA concludes that there are both positive and negative environmental and social effects of the project, and that the main concern is the local social impact: *“Fair compensation and replacement/restoration of affected assets will play a key role in this context and should be detailed in the Land Acquisition and Resettlement Plan”*. The adverse environmental impact is small: *“the project site does not provide high valuable habitats in terms of biodiversity and the anticipated adverse impacts on flora and fauna are of a very local nature”*. The project is hence considered to be *“Medium Risk”* (B) during operation and *“Medium*

High Risk” (B+) during pre-construction and construction, according to the European Development Finance Institutions (EDFI) classification⁵. The emphasis during project implementation will therefore be on the requirement for a land acquisition and resettlement plan, including livelihood restoration, according to IFC Performance Standard 5⁶.

4 Theory of change and key assumptions



*The project contributes directly to the SDG’s marked with black line.

If the GoE follows the main lines of GTP II and the 2014 Electricity Masterplan, including improving access and strengthening of the national grid, then the increased availability and stability of electricity will contribute to economic growth, decent job creation and improved living conditions for the population without increasing the emission of green-house gasses. One of the central assumptions for the effectiveness of the project is that the EEP succeeds in integrating the input from different intermittent energy sources efficiently into the national grid.

The GoE aims for Ethiopia to be a lower middle-income country by 2025 based on carbon-neutral economic growth, reaching universal access to electricity the same year. Even if this goal is probably too ambitious to be reached within the established time

⁵ EDFI standards are used to classify projects according to risk. Projects category B projects are “Projects with limited potential adverse social or environmental impacts that are site-specific and readily addressed through well-known mitigation measures”. Projects category B+ project are “Projects with specific features which can have significantly larger adverse social or environmental impacts, like occurrence of resettlement.”

⁶ IFC Performance Standard define stakeholder’s responsibilities for managing their environmental and social risks.

frame, important steps in this direction can be expected. The expansion of the electricity generation plays a key role in the GoE’s plans to promote growth and lift millions out of poverty.

The main expansion of electricity generation will come from hydropower but the Government wants to develop and include other renewable energy sources to decrease the dependency on hydro-power, as this would expose the energy sector to future climate events, particularly periods of droughts.

The Government relies on a combination of public and private investments to reach its goals within the energy sector. Even if EEP is still the sole producer of electricity for the national grid, the first auctions for IPPs for geothermal and solar power have taken place. The institutional framework for IPPs for wind power generation is currently being developed. EEP is instrumental for promoting and auctioning IPPs. EEP is expecting to launch the first IPP for wind soon, hoping that it could run in parallel with the Assela project, as it is located nearby. However, delays are not unlikely. A substantial increase in tariffs would be required to make wind project commercially viable in Ethiopia.

The Assela Wind Farm is one in several projects within wind energy that are at different stages of planning and implementation. The DBF funding thus provides a contribution to the expansion and diversification of the renewable energy generation.

5 Project Objective and results frame

The objective of the development cooperation among the parties is: *Contribute to increasing the electricity generation capacity based on cost-effective and diversified renewable energy sources, which will help Ethiopia achieve the goal of universal access to electricity and becoming a lower middle-income country by 2025 based on carbon-neutral growth.*

Progress will be measured through EEP’s monitoring framework. For DBF’s reporting purposes the following key outcome and output indicators have been selected to document progress:

| | | | |
|-----------------------|------|--|---------|
| Outcome 1 | | <i>A 100 MW wind farm at Assela is delivering annually on average 330 GWh of electricity to the national grid and thus avoiding the release of 175,890 ton of CO₂ annually to the atmosphere as it replaces electricity produced by fossil fuel based plants.</i> | |
| Outcome indicator 1.1 | | The electricity delivered annually to the national grid from the Assela Wind Farm | |
| Baseline | Year | 2018 | 0 GWh |
| Target | Year | 2021 | 330 GWh |
| Target | Year | 2025 | 330 GWh |
| Outcome 2 | | <i>The Government of Ethiopia maintains wind energy as a priority in the country’s future energy matrix</i> | |
| Outcome Indicator 2.1 | | Percentage of total electricity production coming from Wind Energy | |
| Baseline | Year | 2016 | 7% |

| | | | |
|----------------------|------|---|--|
| Target | Year | 2025 ⁷ | 7% |
| Output 1 | | 100 MW wind farm tendered and built at Iteya, including a substation and connection to the national grid. | |
| Output indicator 1.1 | | Wind generation capacity installed at Iteya | |
| Baseline | Year | 2018 | 0 |
| Target | Year | 2021 | 100 MW wind farm installed and functioning |
| Output indicator 1.2 | | Power Performance Measurement | |
| Baseline | Year | 2018 | - |
| Target | Year | 2021 | The Power Performance Measurement meets the requirements of the contract between EEP and the OEM (normally, difference less than 5%) |
| Output 2 | | 20 EEP staff have received certified training at different levels | |
| Output indicator 2.1 | | Number of EEP staff trained and certified | |
| Baseline | Year | 2018 | No EEP staff has training in O&M of Danish produced wind turbines |
| Target | Year | 2021 | 20 number of staff trained and certified (target to be revised during preparation of tender documents) |
| Output indicator 2.1 | | Mean reaction time until troubleshooting | |
| Baseline | Year | 2018 | - |
| Target | Year | 2021 | The target will be fixed according to the wind turbine manufacturer's specifications of normal reaction times |
| Target | Year | 2025 | The target will be fixed according to the wind turbine manufacturer's specifications of normal reaction times |
| Output 3 | | 5 years of Technical Assistance and spare parts provided by contractor | |
| Output indicator 3.1 | | Technical Assistance provided creating capacity at the wind farm to secure the operation and maintenance, including minor repairs | |
| Baseline | Year | 2018 | - |
| Target | Year | 2021-2023 | Resident engineer providing continuous Technical Assistance in Operation and Management |
| Target | Year | 2024-2025 | Technical backstopping including periodic visits and retraining events |
| Output indicator 3.2 | | Wind farm availability | |
| Baseline | Year | 2018 | - |

⁷ This is a moving target as production from particularly hydro-power is expected to expand dramatically

| | | | |
|--------|------|------|---|
| Target | Year | 2021 | >95% of availability of each individual wind turbine and of the whole wind farm |
| Target | Year | 2025 | >98% of availability of each individual wind turbine and of the whole wind farm |

6 Project budget

| | DKK million | | | |
|--|-------------|-------------------------|---------------|---------|
| | DBF | Other Financing Partner | Own financing | Total |
| Total Investment | 1,260.2 | 0.0 | 4.5 | 1,264.7 |
| Output 1 | 1,233.5 | | 4.5 | 1,237.9 |
| Output 2 | 3.7 | | | 3.7 |
| Output 3 | 19.3 | | | 19.3 |
| Output 4 | 3.7 | | | 3.7 |
| Feasibility Study* | | AfDB | | |
| DBF Support | | | DKK million | |
| Cash grant element of loan | | | 454.4 | |
| Interest subsidy | | | 126.5 | |
| Margin to Danish lending bank | | | 10.2 | |
| Technical Assistance including 1) Consultant for design, tender and monitoring of land acquisition/comensation, 2) Consultant for monitoring/verification and 3) Other consultants (review, publication/dissemination of results etc.) | | | 15.0 | |
| Budget margin 20%*** | | | 121.2 | |
| DBF Total subsidy ** | | | 727,3 | |
| DBF subsidy excl. budget margin | | | 606.1 | |

*Financed by AfDB

** In addition DBF secures loan guarantee equivalent to commercial export guarantee

*** The budget margin subsidy only becomes effective in case the investment turns out more expensive than planned

The total budget is estimated at DKK 1,260.2 million. However, when calculating the DBF support a budget margin is included, which will only become effective if the budget after the tender turns out to be higher. As the loan is tied to tender among firms

Life Cycle Costing

DBF aims at basing the projects on an estimated total Life Cycle Cost. This implies that when choosing project design, both the initial capital cost (CAPEX) and the operation and maintenance costs (OPEX) over the whole life cycle are considered, including the replacement costs of the equipment (there may be differences in quality leading to different expected lifetimes). There is often a trade-off in the choice of technology between the CAPEX and the OPEX so that higher initial investment costs may be associated with lower operational costs. In projects in developing countries, the complexity of the technology has also to be taken into consideration, as well as the robustness of the solution.

established in Denmark, according to the OECD consensus agreement the project must nonviable with a commercial loan, and the grant element must be at least 50% in the case of Ethiopia, as it is classified as a LDC (Least Developed Country).

7 The procurement

A tender consultant, which DBF finances with a grant, will support EEP during the tender process.

The whole wind farm, including training and TA to EEP during the first 5 years of operation (output 1-3), will be tendered as one package among companies established in Denmark. An international construction supervision consultant (also called a FIDIC engineer) will be contracted separately and the cost will be included in the DBF loan (included under the cost of construction in the table). The construction supervision consultant will also be responsible for TA to EEP in the land acquisition and compensation process (output 4). The EEP will sign the contracts with the construction supervision consultants and the contractor which win the tenders.

Apart from an estimate of the project cost, the feasibility study also includes an estimate of the annual energy production and the annual cost of operation and management. Based on this, and the interest rate for the loan, it is possible to calculate the cost of the energy produced, i.e. the break-even price of electricity, which will make it possible to pay back the loan. This is often called the Levelized Cost of Energy (LCOE). If it were a commercial project financed with a 6% loan, the LCOE would according to the appraisal report be 52.5 Euro/MWh. This is much more than what EEP receives presently for the electricity it delivers (around 10 Euro/MWh), and also what EEP would receive if the electricity price is increased to 51 Euro/MWh as planned, of which EEP would receive around 31 Euro/MWh (the rest going to the distribution company, EEU). The project is therefore not financially viable with a commercial loan, which is a condition for the project to be eligible for DBF financing. With a soft loan from DBF with 50% concessionality, the appraisal calculates the break-even price (LCOE) to 28.2 Euro/MWh. This would be enough to make the project financially viable for EEP if the electricity price is increased.

DBF has agreed with EEP that the expected LCOE shall be used to evaluate the financial proposals during tender. This implies that different technical solutions can be compared, as it does not discriminate against e.g. a solution with higher investment costs, but which has a higher expected production and/or a lower operation and maintenance cost. To be able to compare the bids objectively, the calculation of the expected production will be verified by a third party using standard industry software, and the bidders will have to make a financial proposal for operation and management of the

wind farm (even if EEP will not be forced to take the offer but can decide to manage the wind farm with its own staff).

8 Project management arrangement

The parties have agreed to the following management arrangement with the aim to ensure adequate dialogue and timely decisions about this project:

EEP will be responsible for the implementation of the project, supported by consultants. During planning, EEP will be supported by the tender consultant to assist with preparation of relocation/compensation procedures including preliminary hearings and consultations, with the finalisation of tender documents, the procurement and the tender evaluation. During implementation, EEP will be supported by the construction supervision consultant. The supervision consultant will also be responsible for providing technical assistance to EEP for the process of land acquisition, resettlement and livelihood restoration, to make sure IFC standards are adhered to. DBF will consult with relevant stakeholders, including Danish NGO's to ensure that the terms of reference for this consultant adequately addresses above issues.

EEP will set up a Project Management Unit (PMU) under the Office for Generation Programmes, which is standard procedure in EEP. The PMU will include staff that will operate the plant after commissioning. The PMU will include staff with competences in land acquisition/compensation and community engagement/communication.

DBF will have to provide no-objection to the tender documents and the tender evaluation and will have to approve the contract between EEP and the winning contractor and the loan contract between the lending Bank and Ministry of Finance and Economic Cooperation (MoFEC).

DBF will hire a separate monitoring consultant to report to DBF on progress and any problems that will arise. Monitoring will include regular visits to the project. Progress on project implementation and results will be communicated through the web pages of the EEP, DBF and the contractor. DBF will, when the project has been handed over, consider how the results can be communicated.

During construction, it will be the contractor's responsibility to make sure that the contractor and the subcontractors comply with the IFC Performance Standards on Environmental and Social Sustainability (especially on Performance Standard 1 "*Assessment and Management of Environmental and Social Risks and Impacts*", Performance Standard 2: "*Labour and Working Conditions*" and Performance Standard 4 "*Community Health, Safety and Security*"), and the UN Guiding Principles on Business and Human Rights. This will be clearly stated in the tender documents.

After the final design has been made, and before the land acquisition starts, EEP shall present to DBF a detailed land acquisition and compensation plan, including a Livelihood Restoration and Resettlement Action Plan, according to IFC standards. The close monitoring and reporting regarding the implementation of the plan shall be the responsibility of EEP, but the Construction Supervision Consultant will have a separate responsibility to provide technical assistance to EEP, monitor progress and report to EEP and DBF, as well.

EEP will in coordination with the Rural Electrification Programme ensure that all the villages in the area have access to electricity before the wind farm is commissioned. Furthermore, EEP will ensure that the families affected by the land acquisition for the

Assela Wind Farm are given preference for employment at the wind farm, according to the principle of livelihood restoration. Monitoring of this will be included in the ToR for the Construction Supervision Consultant and be followed closely by DBF.

The EEP will have to sign the DBF Buyer's Declaration⁸. This declaration will, among other, include the following conditions:

- EEP will have to implement the compensation according to the Livelihood Restoration and Resettlement Action Plan sent to DBF.
- EEP will in coordination with the Rural Electrification Programme ensure that the villages in the area have access to electricity before the wind farm is commissioned.

In case of non-compliance, DBF will be entitled to withdraw the support for the project and EEP to repay support already received.

9 Financial Management, planning and reporting

DBF will provide a concessional loan to MoFEC in Ethiopia through an international commercial bank with a branch in Denmark. MoFEC will make an on-lending agreement with EEP.

The contractor will send the invoices to the Construction Supervision Consultant for assessment and approval. The Construction Supervision Consultant will forward the invoices to EEP for final approval. EEP will subsequently send the invoices to the commercial bank in Denmark for payment to the contractor.

The Danish commercial bank provides final reporting to DBF. Funds for the Construction Supervision Consultant will likewise be paid from the bank based on request form EEP.

Funds for other consultants will be paid directly by DBF.

DBF shall have the right to carry out any technical or financial mission that is considered necessary to monitor the implementation of the project.

After termination of the project support, DBF reserves the right to carry out an evaluation of the project.

10 Risk Management

The *main assumptions* for the project are:

1. There are competitive Danish contractors that are interested in bidding for the project, that will be subject to tender. This is very likely to be the case as at least two companies have shown interest at this stage.
2. The present electricity tariff is very low, and it is assumed that the Government in the medium run will increase the tariff to around 0.06 USD/kWh, which is still

⁸ DBF Buyer's Declaration is a declaration signed by the buyer towards DBF stating the conditions for the support (incl. zero-tolerance on corruption, Danida right of stoppage, adherence to UNGP) and the potential remedies in case of breach.

low but would allow EEP a sufficient cash flow to maintain the many new investments in electricity generation.

3. EEP will have access to foreign exchange so it can acquire the spare parts needed to keep the wind farm operating.
4. For the increased energy generation to have a positive impact on growth and universal access, the Government will invest in transmission and distribution to make this happen, using both own funds and funds from development partners. Ethiopia aims to reach universal electricity access by 2025 in accordance with the National Electrification Program (NEP) - launched in November 2017 – supporting the implementation of strategic priorities for sustainable energy sector development and scaling up electrification defined in the National Electrification Strategy (launched in June 2016).
5. EEP take the necessary steps to integrate the intermittent renewable sources (particularly wind and sun) into the grid to ensure that curtailment is avoided. Curtailment (meaning that the energy produced is not up-loaded to the grid during low-peak as hydropower is given priority) is presently an issue for the Adama I and II wind farms, primarily because of inappropriate procedures at the National Load Dispatch Centre. The on-going Danish support programme is aimed at helping EEP resolve this issue.

The *main risks* are:

1. Even if EEP has some experience in the operation of wind farms from Adama I and II, the capacity of EEP to acquire the necessary spare parts and to retain the trained staff is considered the main risk. To mitigate this risk, a spare part package to cover the first 5 years of operation will be included in the contract, as well as additional TA to be provided by the supplier as backstopping - for three years after the end of the two-year liability period. This could include online support, as the operation of the wind park can be monitored on-line. In addition, a robust training package will be included that covers additional qualified staff for training to have spare capacity within the organisation, if/when staff leaves (20 persons all in all). This will reduce the residual risk, which is considered medium.
2. The risk that land acquisition and compensation processes will not fully comply with IFC standards. This will be monitored closely by EEP, consultants and DBF and therefore it is not considered to be a major challenge. EEP will have to present a final project management unit set-up, including specialists on land acquisition and community engagement and communication before the DBF loan can be declared effective. After the final design has been made, and before the land acquisition starts, EEP shall present to DBF a detailed land acquisition and compensation plan, including a Livelihood Restoration and Resettlement Action Plan, according to IFC standards. It will be an integrated part of the Terms of Reference for both the tender consultant and the construction and supervision consultant. The DBF monitoring consultant will also follow the process closely, e.g. during semi-annual site visits. The residual risk is considered minor.
3. Experience from projects in other countries indicates that land acquisition and compensation may cause delays. The major risk is that the project will be delayed *after* the contractor has mobilised to the project site, hence causing claims from the contractor, as the client would have the responsibility for solving this issue. To mitigate this risk, EEP will be supported on this issue by the construction

supervision consultant, and DBF and the Danish Embassy in Addis Ababa will monitor this issue closely. This risk is considered medium to major, but the residual risk is considered medium.

4. The soil conditions are not well documented in the FS. This creates an uncertainty regarding the possible need for piling. This risk will make it difficult for the bidders to assess the cost and can imply that the bids get more expensive than necessary. The mitigation is that the tender permits for different scenarios regarding the soil conditions where the towers will be erected and making this part of the contract measurable (i.e. the bidders will provide a cost estimate for the different scenarios and the payment will be according to the actual distribution of the platforms). In case it turns out more expensive than foreseen in the feasibility study, the budget can be increased using the DBF budget margin. This risk is considered minor.
5. EEP prepared thorough calculations confirming that the 230 KV transmission line, which the wind farm will be connected to, can evacuate the energy produced by Assela wind farm. The appraisal assessed that there is still a risk but that it is minor.
6. If the electricity price is not increased, EEP may have problems with funding the necessary operation and maintenance activities. However, this is not a specific risk related to the present project, but to the many electricity generation projects EEP is currently undertaking. The Assela Wind Farm will generate enough cash for operation and maintenance, even at the existing extremely low price, but the contribution to MoFEC to pay back the loan will be very small. EEP and the energy sector are so central to the development strategy of the country, that the risk that the Government will leave EEP without funds to operate is considered minor. This will not be a risk for repayment of the DBF loan as MoFEC is providing a sovereign guarantee.

Annexes:

[Annex 1: Context Analysis](#)

[Annex 2: Description of partner \(EEP\)](#)

[Annex 3: Risk Management Matrix](#)

[Annex 4: List of supplementary materials](#)

[Annex 5: Plan for communication of results](#)

[Annex 6: Process Action Plan for implementation](#)

[Annex 7: Appraisal recommendations and follow-up](#)

[Annex 8: DBF General Introduction](#)

[Annex 9: Quality Assurance checklist for Appraisal](#)

Annex 1. Context Analysis

1. Overall development challenges, opportunities and risks

General development challenges including poverty, equality/inequality, national development plan/poverty reduction strategy, humanitarian assessment

- Ethiopia's growth acceleration has been accompanied by a substantial decline in poverty. Yet, Ethiopia remains one of the poorest countries in the world with very low access to basic services. Ethiopia ranks 174 out of 188 countries on UNDP's Human Development Index (HDI), and 174 out of 186 countries in terms of access to clean water, and 161 in terms of access to improved sanitation. Access to electricity is still very low (27% in 2014).
- Humanitarian situation: Ethiopia continues its recovery from the devastating 2015/2016 El Nino-induced drought that required the delivery of USD 1.7 billion worth of food assistance to nearly 17 million people in many parts of the country. In 2017, roughly 8 million people were exposed to severe drought in large parts of the pastoral areas of Ethiopia. The number of people needing food assistance in 2018 is expected to reach close to 8 million. Even in a 'normal' year, the combined challenges related to accessing food, water, medication etc. are enough to result in a substantial humanitarian caseload. The country is currently hosting more than 900,000 refugees displaced by conflicts, political events, and civil wars in neighbouring countries (mainly, South Sudan, Somalia, and Eritrea). The number of internally displaced people (IDPs) in Ethiopia remains persistently high (app. 1.5 million), driven by recurrent droughts, floods, and local conflicts. Responding to this, Ethiopia relies heavily on foreign assistance and on well-coordinated efforts from the Government of Ethiopia (GoE) and its development partners.
- Official indicators of inequality remain relatively low in Ethiopia (Gini coefficient = 33%), but the spatial disparities in many indicators of wellbeing demonstrate that development has not been entirely inclusive. There are still considerable inequalities – especially related to the extremely poor. Economic transformation (policies that actively seek structural reforms) has not played a major role in the growth acceleration over the past decade. Looking ahead, inequality in Ethiopia is likely to increase under all scenarios.
- Gender inequality is still high in Ethiopia and women remain more vulnerable to risks due to cultural norms and their socioeconomic status. Constraints exist regarding women employment, socio-political rights and empowerment, and general aspects of wellbeing. Women in Ethiopia are exposed to high incidence of female genital mutilation, unwanted pregnancy and/or childbirth, marriage at a young age, sexual harassment, and limited access to appropriate sanitation facilities.

Development in key economic indicators: GDP, economic growth, employment, domestic resource mobilisation, etc.

- GDP and economic growth: GDP in 2016 was USD 72.4 billion and GNI per capita was USD 660. GDP growth was on average more than 10% annually from 2004-2016. Growth has been dominated by massive public investment funded by foreign aid, loans, and non-tradable services (e.g. construction and transport). The public investment rate in Ethiopia is the third highest in the world, while private investment is the sixth lowest. GoE runs a persistent budget deficit (2.4%) and debt is estimated at 30.2% of GDP (2015/16). Ethiopia benefits from high levels of foreign aid (USD 3.2 billion in 2016, 4.4% of GDP), high levels of remittances from the Ethiopian diaspora (USD 6.3 billion, 8.7% of GDP), increasing foreign direct investment (FDI) inflows (USD 3 billion, 4.1% of GDP). Recent slowdown in GDP growth (7.6% in 2016) is mainly associated with the 2015/16 drought, which lowered agricultural productivity and exports, resulting in trade deficits (19.8% of GDP). GDP growth projections also indicate a slowdown in the medium term, but GoE has laid out the ambitious target of achieving lower-middle income status by 2025. Agriculture will remain a crucial contributor to economic growth and the improvement of livelihoods. In October 2017, the National Bank of Ethiopia devaluated the Ethiopian currency (the birr, ETB) by 15%.
- Employment: More than 70% (31 million) of the formal workforce is self-employed in agriculture, while the sector accounts for 37% of total value-added to the economy and roughly half of total exports. About 7.5% (3 million) and 15% (6 million) of the workforce is employed in manufacture and service, respectively. Over half of Ethiopia's labour force (outside the agricultural sector) operates informally in jobs that often do not pay reasonable wages, improve skills or offer much job security.
- Domestic resource mobilisation: The tax-to-GDP ratio of 12.7% remains low compared to peer countries (e.g. Tanzania, Uganda, Rwanda), and the proportion of trade taxes is higher than that of direct or other indirect taxes. Domestic resource mobilisation increasing the flow of taxes and income to the treasury has improved, which may help to offset increased investment and social spending. However, while the proportion of pro-poor spending out of the total government budget increased, aid flows have increased simultaneously. Hence, Ethiopia continues to depend on donor support to underwrite many of the pro-poor basic services.

Status and progress in relation to SDGs, in particular those that are special priorities for Denmark

- *No poverty and zero hunger (SDGs 1+2)*: Ethiopia's poverty rates declined from 55-60% in 2000 to 30.7% in 2017, enabling Ethiopia to cut extreme poverty and hunger rates by almost half (as expected in MDG). However, around 30 million Ethiopians still live in extreme poverty and more than twice (67% of the population) live in severe multi-dimensional poverty and remain extremely vulnerable to shocks. Although, it is forecasted that Ethiopia will be able to reduce these numbers in the next decade, 15-20 million Ethiopians could be living below the extreme poverty line in 2030.
- *Gender equality (SDG 5)*: Ethiopian women are vulnerable to harmful traditional practices like female genital mutilation, forced marriages, early marriage, abductions as well as economic, physical, psychological, and sexual violence. Constraints exist on women employment, socio-political rights, empowerment, and general aspects of wellbeing. In the last decade, GoE has recognised the critical role women's empowerment plays in achieving its development goals and consequently instituted various legal and policy reforms; however, implementation remains a challenge.
- *Affordable clean energy (SDG 7)*: The energy sector has a central role in the Government's development plans, based almost entirely on hydro-power and non-traditional renewables (solar, wind, geothermal, biomass). Ethiopia's potential is huge and will permit the country not only to provide for its own population, but also to export to neighbouring countries. A big challenge is to secure access for the population, as only around 27% of the households are presently serviced. The present phase of the Universal Electricity Access Program aims at achieving universal access by 2025. Even if access is increasing rapidly, the goal is probably not realistic because of the size of the task, but the intention is commendable, and there is no doubt regarding the seriousness of the Government in this respect.
- *Decent jobs and economic growth (SDG 8)*: From 2004 to 2014, real gross domestic product growth averaged 10.8 per cent per year, mainly driven by an expansion of the services and agricultural sectors, while the role of the industrial sector up to now has been relatively modest. As the population grows, urbanisation is also increasing rapidly so there is a need to create decent urban jobs. The GoE has ambitious plans for industrialisation, both directed at the home market and exports, the latter with the creation of industrial zones.
- *Reduced Inequalities (SDG 10)*: Although GoE has dedicated a major part of its budget to pro-poor services and worked to improve inclusiveness, the rapid economic growth of the country in recent decades has resulted in growing inequality. However, inequality in Ethiopia remains low compared to other similar developing countries.
- *Decent work and economic growth (SDG 8)*: The Ethiopian labour force grew from 29 million in 2000 to just over 50 million in 2016. Job creation therefore remains a growing challenge. Total employment increased to >40 million in 2016, of which 31 million are employed in agriculture, 3 million in manufacture, and 6 million in service. An estimated 8% of the labour force is engaged in fulltime paid employment, while the majority is self-employed in agriculture, small-scale businesses and informal work. Over half of Ethiopia's labour force (outside the agricultural sector) operates informally in jobs that often do not pay reasonable wages, improve skills or offer much job security. Underemployment is widespread. The National Social Protection Strategy's first two focus areas are 'Promote productive safety nets' and 'Promote employment and improve livelihoods'. PSNP is designed to deliver on these focus areas, with safety net transfers being provided in exchange for participation in public works. The programme also offers livelihood support to complement the provision of safety net support, with the aim of moving households sustainably out of poverty in the medium-term. However, other programmes, specifically within the agriculture sector are much needed to secure decent work and economic growth to broad parts of the country.
- *Climate action (SDG 13)*: The country has seen more than 15 drought episodes between 1964 and 2015. GoE and local communities have made some progress in addressing resilience, e.g. through the Climate Resilient Green Economic (CRGE) Strategy, stressing climate-friendly initiatives such as reforestation, land rehabilitation, and watershed management, and through PSNP reducing food insecurity and promoting investments in human resilience through quality health, water and sanitation services. Further building resilience is an urgent challenge in Ethiopia.
- *Peace, justice and strong institutions (SDG 16)*: Compared to its violent past, Ethiopia in 2018 is a relatively stable country, although recent political and social protest and unrest shows that Ethiopia still lacks key dimensions of domestic stability. Following the resignation of Prime Minister Hailemariam Desalegn in February 2018, GoE declared a new State of Emergency for six months (the previous one introduced in October 2016 and lifted in August 2017). Prime Minister Hailemariam's resignation followed a period of extensive political and social unrest in parts of the country – mainly in the Oromia and Amhara Regional States. Where the unrest began as an expression of dissatisfaction with, among other things, poor governance, excessive corruption, and land rights issues, they developed into questioning the ruling party's power monopoly. The authorities responded, on the one hand, with excessive use of force against protesters and, on the other, with some recognition of the legitimate demands of the population in relation to social development and governance.

The country's general policy directives and constitution promote equal participation and inclusiveness. A key objective of GTP II is to establish democratic and good governance through enhancing the implementation capacity of the public sector and mobilisation of public participation.

- *Partnerships for goals (SDG 17):* GoE has demonstrated its willingness and capacity to work in partnership with Development Partners. Since 2001, The Development Assistance Group (DAG), has been operational in Ethiopia providing a forum for donors to share and exchange information to foster meaningful dialogue with the government. By adopting more harmonised approaches and enhancing mutual accountability, development partners and the government have come a long way towards realising global aid effectiveness commitments.

Political economy, including drivers of change (political, institutional, economic) (e.g. political will, CSO space, role of opposition, level of donor funding to government expenses, level of corruption, foreign investment, remittances, role of diaspora, youth, gender, discovery of natural resources or impact of climate change etc.)

- *Political will:* To date, GoE has demonstrated a high level of efficiency illustrated by the significant progress across economic, social, and human development indicators. GoE has shown determination towards continued progress, by laying out ambitious development targets in its most recent national development document. All policy choices involve trade-offs, either explicit or implicit. Investing more money in infrastructure for example, diverts resources that could have been spent on health, agriculture, or education. GoE is committed to equitable economic growth. This will require continued investments in agricultural growth supported by public investments in basic service provision and rural safety nets, which led to the significant reduction in poverty over the past decade, as well as the skills that will enable people to take advantages of job creation in industry and services. The main drivers for the recent economic development has been led by political will, and implemented through large-scale public investments and by addressing poverty reduction through agricultural growth, as well as increased focus on industrialisation and commercialisation.
- *Role of opposition:* After their strong showing in 2005, the opposition has been weakened with each subsequent electoral cycle. The May 2015 election results saw the EPRDF win 500 of the available 547 seats with the remaining seats all won by its allies.
- *Level of corruption:* The level of corruption is considered 'high' in Ethiopia; although lower compared to some of the neighbouring countries. It ranks number 108 out of 176 countries on Transparency International's Corruption Perceptions Index.
- *CSO space:* GoE applies a very stringent and highly controlled approach to all Civil Society Organisations (CSO's) in the country, be it national or international. Two laws adopted in 2009 (the Charities and Societies Proclamation and the Anti-Terrorism Proclamation) decimated the country's already weak human rights community.
- *Level of donor funding to government expenses:* Ethiopia is depending on donor support to underwrite many of the pro-poor basic services, e.g. the salaries of primary school teachers, agriculture development agents, and health extension workers. External assistance reached about half of the total health expenditure by 2010/11. While safety net programmes and other social programmes such as PSNP have been almost exclusively donor funded, GoE has taken steps toward increasing domestic financing to these programs. Currently, the ODA to GDP rate stands at 4.4%.
- *Foreign Direct Investment:* FDI is projected to increase from 4.6% of GDP in 2015/16 to 6% in the medium term, reflecting improved competitiveness and policies to attract foreign investment.
- *Remittances:* Remittance inflows to Ethiopia have been increasing in the past several years, reaching an estimated 9% of GDP in 2015/16.
- *Role of diaspora:* The diaspora has a crucial role in attracting the inflow of foreign investment and the diaspora's investment in different sectors in Ethiopia has reached about USD 3 billion. Some say that the contribution of the diaspora is worth more than the combined outcome of FDI and ODA, but reliable figures are hard to come by. Since the eruption of anti-government protests in Ethiopia in late 2015, its global diaspora has also been deeply involved in efforts to shape the political landscape and be a catalyst for change. There are examples of the diaspora playing a destabilising role, particularly on social media.
- *Youth:* GoE has recognised youth-related challenges across a range of socioeconomic and political issues. The rapidly growing number of youths can be seen as a resource and/or a challenge to Ethiopia. In the absence of inclusive growth, large young populations entering working age without jobs or economic opportunities can be a significant driver of social unrest.
- *Climate change:* Recent droughts in 2015/16 and 2016/17 illustrate the potential scale of impact from weather and climate changes on food security, nutrition and water access, as well as on a range of other development indicators. Ethiopia is a climate ambitious country.

2. Fragility, conflict, migration and resilience

Situation with regards to peace and stability based on conflict analysis and fragility assessments highlighting key drivers of conflict and fragility, protection and resilience, organised transnational crime and illicit money flows and how conflict and fragility affect inclusive private sector development and women and youth

- *Key drivers of internal conflict and fragility:* Judging from Ethiopia's overall Fragile States Index (FSI) score over the last few years, the situation in country has been incrementally worsening over the past decade. However, the Fragile States Index sees proportion of Overseas Development Aid (ODA) of GDP as an important fragility factor, whereas in Ethiopia it should not be overlooked that ODA has probably contributed significantly to upholding stability in the last 25 years. Nevertheless, large protests erupted in November 2015 and continued through much of 2016/17 into 2018, concentrated in the Oromia and Amhara Regions. Protesters have been calling for increased political and economic inclusion. Altogether, these protests have exposed deep-rooted tensions between Ethiopia's diverse ethnic groups and brought to the surface longstanding frustrations and grievances over perceived systematic political and economic exclusion of a large segment of the population. The recent social and political unrest has caused significant damage to foreign- and locally-owned businesses. Religious-based conflicts are rarely seen in Ethiopia, although local instances can be observed from time to time.
- Recent setback has to be seen within the context of ongoing demographic pressures and natural disasters, and flows of refugees (from conflict-ridden neighbouring countries) and IDPs. Land conflicts, including with ethnic undertones, have also long been a reason for inter- and intraregional clashes in parts of the country. This still has the potential to fuel perceptions of inequality. In the absence of inclusive growth, large young populations entering working age without jobs or economic opportunity can be a significant driver of political and social unrest.
- *Key drivers of regional conflict and fragility:* Ethiopia is surrounded by instability of the conflicts in Somalia and South Sudan and the strained relationship with Eritrea. Porous borders, humanitarian challenges, extreme poverty, mediocre rule of law and access to justice, widespread corruption, the marginalisation of women, coupled with gender-based violence, and the presence of violent opposition groups in several countries in the region contribute to low levels of human security. Ethiopia is currently hosting the second-largest refugee population in Africa, and is furthermore faced with a number of 'spill-over' consequences of the regional instability with regard to illegal immigration, smuggling of weapons and drugs, and human trafficking.
- *Outwards migration, trafficking, and transnational crime:* Ethiopia is an important country of origin, transit, and destination for people in mixed migration flows in the Horn of Africa region. Lack of economic opportunities, demographic challenges, food insecurity, and rising domestic tensions are elements contributing to a significant numbers of Ethiopians losing hope for the future. Data from Eurostat indicates that in 2015, 6,350 asylum applications by Ethiopian nationals were received in European countries. In addition, other sources state that 30-40% of Eritrean migrants in Europe could be Ethiopians. Refugees and migrants from Somalia, Somaliland, and Eritrea cross into Ethiopia and move on to Sudan, Egypt, and Libya in an attempt to reach Europe. There exists a strong positive perception towards irregular migration among Ethiopians; many travel through networks of illegal brokers and smugglers, often through dangerous situations in transit countries. Young Ethiopians are recruited from the rural areas and urban slums with promises of a better life in the Middle East and Gulf states. Ethiopia's location within the Horn of Africa makes it vulnerable to money laundering-related activities perpetrated by transnational criminal organizations, terrorists, and drug trafficking organizations. Moreover, Ethiopia faces a number of significant socioeconomic and political vulnerabilities that pose continued and increased risks of illicit money flows, including the prevalence of a large informal and cash-based economy; the prevalence of corruption, tax evasion and illicit financial flows; poorly managed and porous borders; limited control mechanisms over movement of cash; and regional instability.

Identifying on-going stabilisation/development and resilience efforts and the potential for establishing partnerships and alliances with national, regional and other international partners in order to maximise effects of the engagements

- *Stable political settlement and economic development:* Politically, Ethiopia has been relatively stable since the early 1990s, in contrast to much of the region surrounding it. This has been the case in part because of the continued dominance of the Ethiopian Peoples' Revolutionary Democratic Front (EPRDF) in the form of single-party rule and its effective monopolisation of the use of resources and force. On the positive side, this has enabled both a prioritised and a resource-empowered development strategy that has achieved a number of successes, and has also helped keep Ethiopia largely safe from the many threats, including those that emanate from its volatile neighbours. A central element in the Danish partnership with Ethiopia is dialogue, including through the Development Agency Group (DAG) and the EU's Article 8 Dialogue on the developmental and societal trajectory taken. Denmark also cooperates with a wide range of partners in

Ethiopia to support Ethiopia's ambition of achieving middle-income status by 2025 through green growth and poverty reduction.

- *Protection and resilience:* Ethiopia has achieved substantial progress in economic, social and human development over the past decade, enabling the country to reduce extreme poverty and hunger rates by half. Together with its development partners, GoE has improved Ethiopia's ability to protect its people and development gains from weather shocks. Of crucial importance, GoE created the PSNP in 2005 that combines food and cash transfers to Ethiopia's poorest and most food insecure households with a work requirement for able-bodied recipients.
- *Migration and trafficking:* Ethiopia is a key participant in the EU's Migration Partnership Framework – aimed at addressing the challenges of managing migration along the Central Mediterranean Route (via Libya to Europe), as well as supporting returns and better border management. The African Union (AU) and EU members have reached a common understanding that more economic opportunities must be created for the growing youth populations in Ethiopia and beyond to reduce the incentive to leave and the risk of being lured into illegal networks. Denmark's funding towards poverty reduction (through PSNP) and improved agricultural commercialisation (through ATA) provides a small, but significant contribution to this end. Further, Denmark is also engaged in migration-related interventions in partnerships with IOM (reintegration of stranded Ethiopian migrants). Further, Denmark also supports humanitarian interventions in the country, including through Danish, international and local NGOs. Further Denmark supports the roll-out of the Comprehensive Refugee Response Framework (CRRF) for Ethiopia.
- *Money laundering, transnational crime and terrorist financing:* Ethiopia's efforts to combat these issues are relatively recent. Ethiopia has taken important steps to improve its policies and control mechanisms, including enacting a preventive system for money laundering and terrorist financing, which was started in 2012. Although the Attorney General's Office's officials have received training, the Ethiopian law enforcement community, from investigators to prosecutors to judges, remains deficient in its awareness of the various criminal activities and its understanding of how to address them. GoE's poor record-keeping systems in general and lack of centralised law enforcement records in particular, hinder the federal police's ability to identify and investigate trends in money laundering and terrorism financing. Denmark supports GoE in strengthening its institutional capacity to prevent and combat money laundering and terrorism financing. The goal is to mitigate the illicit flow of money to and from the region, not least in response to hinder financial support to terrorist groups in Somalia.

Issues and concerns of relevance to Danish interest in the area of security and migration

- Denmark has significant security, development, and economic/commercial interests in a stable and secure Ethiopia. A destabilised Ethiopia would not only be a significant drawback for the Eastern African region and beyond, it would also be a risk to international peace and security. Furthermore, a destabilised Horn of Africa would also risk increased migratory flows towards Europe. Currently, a number of Ethiopian nationals remain in Denmark without legal basis.

Identify where Denmark has comparative advantages that may lead to more effective and efficient programming and better results including where Denmark may contribute with deployment of specific expertise and capacities

- Denmark has a comparative advantage by being a flexible and predictable partner, able to respond to emerging crises and opportunities at short notice. Through Danida Business Finance, EEP will get Danish produced wind turbines, which are known to be among the best in the world. The project will provide technical assistance, which complements the support provided by the Danish Energy Agency.....

Considerations regarding the humanitarian situation, migration, refugee and displacement issues, including the need to integrate humanitarian-development linkages and long term strategies

- The Danish Aid Programme will enhance the coherence between humanitarian responses and development cooperation in line with The World 2030.

Relevant issues and considerations related to radicalisation and violent extremism and the potential for Danish engagement to prevent and counter violent extremism (P/CVE)

- With regard to risks related to terrorism financing, Ethiopia is located in a highly volatile region, with both Eritrea to the North and Somalia to the East providing support to terrorist (Al-Shabaab) or armed opposition groups (e.g. the Ogaden National Liberation Front, Oromo Liberation Front) active in Ethiopia. Besides, from programme activities addressing poverty-related root causes, Denmark contributes to P/CVE through its regional support to AU, IGAD and ECOWAS.

3. Assessment of human rights situation (HRBA) and gender⁹

Human Right Standards (international, regional and national legislation). Identify the level of achievement of key human rights standards for the context you are working in.

- GoE has ratified a number of Human Rights Conventions, has adopted a Human Rights based Constitution, and has established a National Human Rights Commission and an Ombudsman Institution. In 2014, in response to the Universal Periodic Review (UPR) by the UN Human Right Council (OHCHR), GoE launched a National Human Rights Action Plan (NHRAP), which is a reflection of the country's existing human rights policies and laws. According to the follow-up from the OHCHR, GoE has *"taken measures to successfully implement the UPR recommendations, including additional legislative measures to further strengthen the institutions that play central role in the protection and promotions of human rights"* (OHCHR, 2014). In April 2017, Ethiopia launched the second NHRAP that aims to advance the respect and fulfilment of fundamental human and democratic rights recognised in the constitution through scaling up of best practices in the implementation of the first NHRAP.
- Despite the fact that key international human rights obligations are incorporated in the constitution and the legal framework, their implementation is questionable. In the last 2-3 years, where Ethiopia's economic achievement have been accompanied with social and political unrest, resulting in the State of Emergency between October 2016 and August 2017 and again from February 2018, the Ethiopian authorities have been using the Anti-Terrorism Proclamation and the CSO Law to justify violations of basic human rights. This continues to take place despite reports and calls from international organisations, the EU or individual states demanding the Ethiopian authorities to respect their international human rights obligations. Other human rights challenges in Ethiopia include violence and societal discrimination against women; female genital mutilation/cutting; abuse of children; trafficking in persons; societal discrimination against persons with disabilities, persons based on their gender identity and sexual orientation; and limits on worker rights, forced labour, and child labour.

Identify the most binding constraints on the intended target group in terms of human rights.

- The target group is the whole population, whether connected to the grid or not. Barriers are economic, educational, social, and civil marginalisation and exclusion of disadvantaged segments of the population, as well as broader protection issues related to the humanitarian situation and context.

Given the analysis of achievement of human right standards, establish what Denmark should prioritise in the proposed outcomes of the programme.

- The GoE has universal access as a highly prioritised target, and the electricity tariffs are cross subsidizing so there is a lifeline tariff for low-consumption households. Several other development partners are supporting the GoE in achieving the established goal of universal access, with the main development partner in this area being the World Bank and the AfDB. Denmark will focus on increasing the generation of electricity based on wind energy, where Denmark has a comparative strength. Even if the GoE plans to increase the electricity price, which presently is very low, it is expected that it will maintain cross-subsidization for the low consumption households. In the process, Denmark will ensure that all affected people of the project have been resettled and compensated and their livelihood restored according to IFC PS5.

Universal Periodic Review. List recommendations from Council for Development Policy (UPR) relevant for the thematic programmes and from any treaty bodies, special procedures, INGOs, Human rights institutions etc. that require follow up by partners in the programme.

- Ethiopia has submitted the second cycle national report to the working group on the Universal Periodic Review. The UPR recommendations to Ethiopia, Report of the Working Group on the Universal Periodic Review (A/HRC/27/14) have been broadly consulted in the process.

Identify key rights holders in the programme

- These include in general the population of Ethiopia, whether it presently has access to electricity or not.
- More specific right holders are the households that will be affected by the land acquisition for the Wind Farm.

Identify key duty bearers in the programme

⁹ The purpose of the analysis is to facilitate and strengthen the application of the Human Rights Based Approach, and integrate gender in Danish development cooperation. The analysis should identify the main human rights issues in respect of social and economic rights, cultural rights, and civil and political rights. Gender is an integral part of all three categories.

- GoE, in particular MOWIE, and EEP regarding electricity generation and the Universal Access Programme.
- The Woreda (district) and lower (“Kebele”) authorities have a particular responsibility related to the land acquisition, compensation and livelihood restoration for the project affected people.

Human Rights Principles (PANT). Participation. Identify barriers for participation, inclusion and empowerment of rights holders.

- Barriers are economic and cultural, involving marginalisation of disadvantaged segments of the population, and perceptions and norms on participation and inclusion in public matters. In addition, social and cultural norms can sometimes create social barriers preventing the active participation of girls and women in development activities. A lack of awareness of rights and the means to access them also acts as a barrier.

List key support elements included to promote participation and inclusion.

- During the elaboration of the ESIA, a series of consultation meetings have been held with the woreda authorities and the four kebeles that will be affected by the construction of the wind farm. 25-30 families are expected to be directly affected.
- Continued participation and inclusion during implementation facilitated by the construction and supervision consultant.

Accountability. Identify accountability mechanisms in the relevant area – both horizontal and vertical.

List any key support elements included to promote accountability.

- Accountability mechanism starting from Federal to Regional and district (“Woreda”) level are in place. Sector Offices at Woreda, Region and Federal level are accountable to their councils at the same level and the Sector Offices at the higher level. At Woreda level, the administrator and the Cabinet are accountable to the Woreda Council and the Regional Council. At the Regional level, the Regional President and its Cabinet are accountable to the Regional Council and the Parliament at the Federal level. Implementing agencies at Local and Regional levels are also accountable to ministries and national agencies at Federal level. Although these structures are in place, it often lacks proper capacity and transparency, hence decreasing the effective of accountability.

Non-discrimination. Identify groups among rights-holders excluded from access and influence in the thematic programme areas identified.

- As the Government strives for universal access, no groups among the rights holders are expected to be excluded.

List key support elements included to promote Non-discrimination.

- No specific elements are planned.

Are disaggregated data available on most vulnerable groups?

- The ESIA includes detailed socio-economic data on the population of the 4 kebeles that are affected. There is no detailed data yet on the families that will be affected by the construction of the wind farm, as the precise location of the wind turbines will be determined during detailed design (by the contractor, after the contract has been awarded).

Transparency. Assess the extent to which information is accessible to rights holders including marginalised groups. If relevant, ensure that information is available in other than official languages.

- The construction supervision consultant will have in the job description to provide technical assistance to EEP in the area of communication during the design and construction, including regarding the land acquisition and resettlement process.

List key support elements included to promote Transparency.

- See above.

Gender. Identify key challenges and opportunities for gender equality.

- Because of an increased focus on gender, there has been significant improvement in the societal attitudes towards gender equality and women’s empowerment in Ethiopia. However, even if the political commitment and resource allocation towards gender equality in most sectors are at good levels, challenges remain with regards to deep-rooted cultural and traditional attitudes or values and adequate human resource and systems for data collection and analysis. Key challenges identified include lack of political and technical capacity to implement gender policies and legislation in full, women’s limited access to and control of resources especially with respect to productive resources, household economy and decision-making power, as well high incidence of gender based violence, child marriage, trafficking of women and harmful traditional practices such as Female Genital Mutilation.

Identify assessments on gender, such as CEDAW-reporting, SDG National Action Plans, UPR, and other relevant gender analysis.

- Denmark is following the joint approach in shared assessment under the UPR. Other studies and assessments, such as the National Report on the Implementation of the Beijing Declaration and Platform for Action (2014) and UN Women's Preliminary Gender Profiles (2017) highlight issues of gender gaps relating to respect for human rights, democratic principles and political reforms. In October 2016, the CEDAW released its Eighth Periodic Report on Ethiopia, which summarises women rights violations as well as judicial reforms that are relevant for addressing issue of gender equality, e.g. gender based violence and lack of gender-sensitivity in handling judicial cases, access to justice.

Identify constraints for addressing gender equality issues.

- Constraints mostly revolve around cultural practice, since the policy and institutional framework is almost in place. Ethiopia is a signatory to international conventions addressing gender equity and the Constitution of Ethiopia provides an enabling legal framework to address these issues. Slow enforcement of policies and legislation by various institutions, the police and the Judiciary especially in regards to addressing the issue of gender based violence, as there is a high incidence of domestic gender based violence directed at women and children. In addition, Female Genital Mutilation/cutting (FGM) is still being practiced in many parts of the country, even though it has been abolished by law. Sexual and Reproductive Health and Rights are slowly being accepted and promoted through health extension policies, but issues of traditions, customs, and perceptions still need to be addressed.

Identify opportunities for addressing gender equality issues.

- 1) GoE has put gender issues at the forefront of its second Growth and Transformation Plan (GTP II).
- 2) The Ethiopian Women's Development and Change Package focuses on urban and rural women and promotes the creation of cooperatives societies as to ensure their economic benefit.
- 3) Youth policy also gives priority to female youth and is focusing on educating and training them in various professions and skills such that they equally participate in and equitably benefit from economic & social development, good governance and democratic affairs.
- 4) At grassroots level, women's associations have been established in almost all the regions, including through the government established Women Development Army (WDA) among women living in the same neighbourhoods.

Describe key strategic interventions to promote gender equality within each thematic programme.

- There are not deemed to be any specific gender issues related to the programme. The electricity produced by the wind farm will be supplied to the national grid. Access to electricity is an equal need for men and women, and the GoE's goal is universal access and affordable energy to low consumption households.

Identify gender equality indicators aligned with national targets on gender, if possible.

- The resettlement and livelihood restoration plan will be closely monitored by EEP with an active role by the construction supervision consultant. The DBF monitoring consultant will be tasked with carrying out a survey among the affected population to check that the process has been in accordance with IFC guidelines.

4. Inclusive sustainable growth, climate change and environment

Assess the overall risks and challenges to inclusive sustainable growth and development from the impact of climate change and environmental degradation; Assess the status of policies and strategies in the country / thematic area / organisation to ensure that development is inclusive and sustainable, avoid harmful environmental and social impacts and respond to climate change; and assess the political will and the institutional and human capacity to implement these policies and strategies.

- The present project is directly related to climate change mitigation, as it will provide electricity based on renewable energy to the grid, and hence lessen (or avoid) the dependence on fossil fuel. The project will help to diversify the energy matrix, as the GoE promotes several renewable sources as hydro, geothermal, solar and wind energy, with a role also for biomass as back-up power. Significant investments are ongoing in all these areas with different funding sources, so there is no reason to doubt the seriousness of the GoE's intentions in this area.
- The promotion of non-hydropower renewable energy is important to make the electric network more resilient to climate change, as the country becomes less dependent on hydro-power, which is vulnerable to droughts.

Identify opportunities for mainstreaming support to inclusive green growth and transformation to a low-carbon and climate resilient economy in the programme thematic areas and DEDs.

- The present project is direct support to a low-carbon and climate resilient economy.

Identify potential risk and negative impacts related to environment and climate change from the proposed thematic areas and DEDs and consider how these may be mitigated in the design of the programme and the relevant DEDs.

- No particular effects are identified, as neither the wind power potential, nor the wind farm itself are expected to be effected by climate change.

Identify if EIA (Environmental impact assessment) or similar should be carried, including legal requirements in partner countries / organisations.

- An Environmental and Social Impact Assessment has been elaborated during the process of project preparation.

Consider rights and access to key natural resources: land, water, energy, food and agriculture, including impacts on employment for youth, women and indigenous peoples, etc.

- The main concern is the impact of the project on the part of the local population that will be affected by land acquisition. 25-30 families are expected to be affected, of which 2 families will have to be resettled. The construction supervision consultant will support EEP in the compliance with the IFC guidelines for land acquisition, land compensation and resettlement. The DBF monitoring consultant will carry out an independent survey of the families affected to make sure there have been compliance with the IFC guidelines.

5. Capacity of public sector, public financial management and corruption

Briefly summarise the key conclusions and implications for the programme of the analysis of the below points:

Capacity of the public sector for policy making, enforcement and service delivery

- Over the past decades, GoE has been implementing major reform programmes to enhance public sector efficiency, effectiveness, transparency, and accountability. As a result, public sector governance has measurably improved – at least in relative terms – illustrated by the significant progress across economic, social and human development indicators.
- Whatever achievements the public service reform programmes have gained, they have not sufficiently addressed the problems of good governance. Existing challenges of public sector governance and management in Ethiopia range from broader institutional and structural deficiencies to specific issues such as ineffectiveness, inefficiency, lack of capacity, corruption, and rent seeking. As a result, the ability of the government to formulate and implement sound policies and the low quality of regulatory institutions and governance affect the adequate provision of public service, weaken incentives for good performance, and undermine the delivery of results.
- In the GTP II, GoE has shown determination towards continued socioeconomic progress, by laying out ambitious development targets in health, education, economic growth, and infrastructure sectors. GoE also acknowledges that ‘the hitherto assessment of outcomes on good governance indicates that there is yet a lot to be done’ (GTP II, p 89) and that ‘concerted efforts will be made to enhance the implementation capacity of the public sector, mobilising public participation, promoting, and building a democratic culture’ (ibid, p 90). Moreover, corruption and rent seeking are identified as the main impediments to overall socio-economic development.

Quality and capacity of PFM, including budget credibility, comprehensiveness and transparency as well as control and external scrutiny / audit in all phases of the budget process as well as participation of citizens / CSOs in monitoring public budgets and corruption

- Public Financial Management in Ethiopia has been strengthened in conjunction with the country’s efforts to improve service delivery for the last 10-15 years. The GoE has fully recognised that a key tool for improved service delivery and social accountability is a strong public financial management system.
- Significant changes in drafting legislative and policy frameworks have enabled the public finance to be managed more comprehensively. Predictability and control of public expenditure budget outturn has improved at federal level, but less at the regional level. According to the World Bank, an accurate and reliable cash management and control system has been established.
- In terms of budget credibility, Ethiopia has improved its performance over the last couple of years, bills are cleared on time, there are no arrears, payroll systems are robust, the internal control system is comprehensive, the inter-governmental fiscal transfer system works well and cash transfers are predictable up to the local government level.
- External audit follows international standards.
- The main weaknesses identified at the federal level relate to tax collection, public access to budget information, a medium-term perspective in budgeting, unreported extra-budgetary operations and parliamentary oversight.

- The overall fiscal transparency of the Federal Government is still low: the budget is not available to the public at the time it is submitted to Parliament, and neither are budget execution reports during the year.
- Overall, fiscal discipline is strong, but lack of transparency limits the availability of information on government performance and on how fiscal risks are being addressed.

The corruption situation and relevant anti-corruption measures and reforms

- The levels of corruption in Ethiopia are generally considered to be high, although lower than in comparable regional countries. Examples of corruption include facilitation payments and bribes being necessary to keep land leased from the state. Corruption may be seen as a proxy for how efficiently the GoE is able to use revenues.
- Ethiopian anti-corruption law is primarily contained in the Federal Ethics and Anti-corruption Commission Establishment Proclamations No. 235/2001 and No. A33/2005 (Anti-Corruption Law). Facilitation payments are illegal, and it is forbidden for civil servants to accept gifts or hospitality that may affect their decisions.
- A legislative framework against corruption exists in Ethiopia and anti-corruption drives have recently increased. The GoE has some credence in reducing corruption by establishing an anti-corruption watchdog and persecution and sentencing of a number of high-profile corruption cases. The past month have seen a number of high-level arrests due to corruption (including a State Minister, in the Ministry of Finance and Economic Cooperation).

6. Matching with Danish strengths and interests, engaging Danish actors, seeking synergy

| | |
|---|--|
| <p>Identify:</p> <ul style="list-style-type: none"> - where we have the most at stake – interests and values, - where we can (have) influence through strategic use of positions of strength, expertise and experience, and - where we see that Denmark can play a role through active partnerships for a common aim/agenda or see the need for Denmark to take lead in pushing an agenda forward. | <ul style="list-style-type: none"> - The project has the capacity to involve private firms established in Denmark in the provision of state-of-the-art technology within wind energy. Denmark has a comparative strength in this area vis-a-vis other development partners. This also include contribution from Danish civil society organisations with special knowledge in the area. - The project has together with the ongoing support programme for wind energy the potential to open up for a better understanding of the potential of wind energy and hence to create demand for further expansion. - Denmark is actively engaging with other development partners, particularly the World Bank, AfDB and the French Cooperation, which are all active within the energy sector. |
| <ul style="list-style-type: none"> - Brief mapping of areas where there is potential for increased commercial engagement, trade relations and investment as well as involvement of Danish local and central authorities, civil society organisations and academia. | <ul style="list-style-type: none"> - The project is particularly opening up for Danish wind energy firms, but also Energinet.dk has through the on-going support programme a direct cooperation with EEP to support the integration of different intermittent renewable energy sources into the national grid, where Denmark has a unique experience. |
| <ul style="list-style-type: none"> - Assessment of the donor landscape and coordination, and opportunities for Denmark to deliver results through partners including through multilaterals and EU. | <ul style="list-style-type: none"> - There is a donor working group for the energy sector, currently headed by the world bank. Denmark is an active partner. |

Annex 2. Description of the partner organisation, EEP

Ethiopian Electric Power (EEP) is the project owner. EEP was created in 2013 as the former EEPCo was split up in two: EEP, which would manage the generation and transmission of electricity, and the Ethiopian Electric Utility (EEU), which would be responsible for distribution. Despite this formal division of EEPCo, EEP and EEU are still closely connected and there is no formal seller-buyer relation between the two companies. They are presently working under an agreement, where the income from sales of electricity is divided between them with 60% to EEP and 40% to EEU.

EEP is presently the only provider of electricity to the national grid. However, several projects based on a Power Purchasing Agreement (PPA) are underway. One of the biggest is for a 500MW geothermal plant at Corbetti, 200 km south of Addis Ababa, for which a contract was signed with an Icelandic consortium in December 2017, a construction that is expected to take 8 years. Another is a 100 MW solar power plant for which the winning bidder was Italian ENEL Green Power (October 2017, no contract signed yet).

The total generation capacity of EEP was in 2017 around 4.3 GW, of which almost 90% is hydropower. The hydropower capacity will more than double when the huge Grand Ethiopian Renaissance Dam on the Blue Nile (6.4 GW) comes into operation (the filling up of the dam is expected to happen gradually as it is hugely controversial with particularly Egypt). The Genale-Dawa 3 hydropower plant (254 MW) is close to commissioning. There are presently 3 wind farms in operation: Ashegoda close to Mekelle in the Northern Tigray Province (120MW) and Adama I and II south of Addis Ababa (203 MW). Two wind farms are presently under construction by Chinese contractors in the East: Ayisha I and II (240 MW).

Djibouti and Sudan are connected to Ethiopia by a high-voltage power line. A 400 MW energy purchase agreement has been signed between Kenya and Ethiopia, and a 500 kilovolt (kV) HVDC line between the two countries is under construction.

EEP operates and maintains all high-voltage transmission lines across the country, which covers more than 9,000 km with varying voltage levels ranging from 66kV to 500kV; and more than 90 sub-stations. EEP also operates the National Load Dispatch Centre. Total EEP staff is around 3,500.

Ethiopia's hydro-power, including the reservoirs that typically can store water for a full year's power generation, a fact that in principle is an excellent starting point for the integration of wind power, in the same way as the Danish wind farms are working with hydropower from Norway and Sweden. Furthermore, wind power is well suited to complement hydropower, as wind power resources are high in the dry season when water resources are limited, and vice versa. However, the existing wind farms are presently being curtailed during night hours when consumption is low. According to a recent study by Energinet.dk, there are no obvious technical reasons for this. The issue seems to be mainly a question of introducing better operating procedures for the integration of the intermittent energy sources (wind and solar). The French cooperation has agreed to finance a new National Load Dispatch Centre, which presently is in the design phase. The Danish bilateral programme "*Accelerating Wind Energy in Ethiopia*" includes technical assistance to EEP by Energinet.dk to improve the capacity for this integration of intermittent energy sources into the national grid.

The Electricity Generation Department of EEP has considerable experience in managing big complex generation projects, mainly within hydropower. However, the experience with wind project is still limited.

The Operation Department of EEP is responsible for the management of the electricity generation facilities. Again, the main experience is within hydro-power,. EEP is presently only managing the Adama I and II wind farms (the Ashegoda wind farm is managed by the French Contractor). Therefore, as mentioned, an extensive training package will be included in the project. Key O&M staff will be given more profound knowledge of the plant and additional personnel will be trained (all in all 20 persons).

The financial result for the first half of 2014 was according to the audited financial report:

| | Million ETB |
|-------------------------------|------------------------|
| Revenue, electricity sales | 1,586.2 |
| Cost of production | 1,124.2 |
| <i>Gross operating profit</i> | <i>462.0</i> |
| Other income | 212.6 |
| <i>Operating expenses</i> | |
| Marketing and sales | 92.4 |
| Administration | 2.7 |
| Borrowing costs | 513.2 |
| Other costs | 20.8 |
| Profit for the period | 45.5 |

As it can be seen, EEP had a small operating profit of ETB 45.5 million for the period (around USD 2.2 million).

The balance sheet was the following in mid 2014:

| | |
|-------------------------------------|------------------|
| Fixed assets | 151,646.8 |
| Current assets | 2,058.3 |
| Total assets | 153,705.2 |
| | |
| Long term liabilities | 112,104.2 |
| Short term liabilities | 11,136.9 |
| Total equity | 30,464.0 |
| Total equity and liabilities | 153,705.2 |

As it can be seen, EEP has quite substantial long term loans of ETB 153.7 billion (around USD 7.7 billion). The largest part of this is domestic bonds issued by EEP (ETB 84.8 billion) to finance the large dam projects. Other creditors are China EXIM bank (ETB 14.3 billion), Industrial and Commercial Bank of China (ETB 4.5 billion) and BNP Paris Bas (ETB 2.8 billion).

Annex 3. Risk Management Matrix

Contextual risks

| Risk Factor | Likelihood | Impact | Risk response | Residual risk | Background to assessment |
|---|------------|--------|--|---|--|
| The Ethiopian foreign debt becomes unsustainable | Unlikely | Major | None | - | The IMF debt sustainability analysis classifies the risk as “moderate” |
| The GoE decides not to increase electricity tariffs | Unlikely | Major | Policy dialogue in the Energy Sector Working Group | The residual risk is not expected to be much reduced. | The issue of the electricity tariff is very sensitive, and an increase in the tariff will surely depend on the political situation. It is likely to be gradual. The cross subsidisation is expected to continue to protect poor households and increase connections to the grid. |

Programmatic risks

| Risk Factor | Likelihood | Impact | Risk response | Residual risk | Background to assessment |
|--|---------------|--------|---|--|--|
| Delay in the land acquisition and compensation | Likely | Minor | To be taken into account in the contract- | Still considerable | Delays in the land acquisition and compensation process are among the most common reasons for delay in larger infrastructure projects. |
| Delays in the transport of the wind turbine components | Likely | Minor | None | - | This tends to happen in many wind projects in remote areas. Ethiopia has no own port. However, it implies only a delay. It does not endanger the project. |
| The uncertainty regarding soil conditions can lead to excessively high prices. | Likely | Minor | Permit the bidders to present scenarios according to the soil conditions for the location of each wind tower. | This will diminish the risk significantly. | If measures are not taken during tender to let the bidders include scenarios, they will have to price the uncertainty. |
| The high voltage line selected for connection may not be capable of evacuating the power produced by the wind farm | Very unlikely | Major | The contractor will have to make his own assessment regarding the | This will diminish but not eliminate the risk. | EOP has presented a realistic calculation asserting that the HV line will be able to evacuate the power. However, if there were a need to strengthen the HV line, this would require extra funding, which might delay the project. |

| Risk Factor | Likelihood | Impact | Risk response | Residual risk | Background to assessment |
|--|---------------|--------|--|--|---|
| | | | capacity of the HV line. | | |
| The issue of curtailment of the wind farms during night hours has not been solved before the wind farm is connected. | Unlikely | Major | The Danish bilateral support programme should address this. Together with other development partners raise the issue with EEP. | This will diminish but not eliminate the risk, at least in the short term. | The lack of solution to the curtailment issue will affect the benefit that can be reaped from the investment. However, as the problem is likely to be a question of operating procedures, it should be possible to solve with the support from several development partners active in the sector. |
| EEP does not have sufficient capacity to operate and maintain the farms | Unlikely | Major | Include a training package and 5 years of support from contractor. | This will diminish the risk significantly but not eliminate the risk after year 5. | EEP will at the moment of commissioning have quite a lot of experience from management of the Adama wind farms. |
| EEP does not have sufficient funds for O&M. | Unlikely | Major | Policy dialogue in the Energy Sector Working Group concerning the need for tariff adjustments. | This will diminish but not eliminate the risk. | The audited statements for EEP for 2014 shows it has a surplus and capacity for certain investments with own funds. However, if tariffs are not adjusted, this may no continue to be the case, |
| EEP does not have foreign exchange to pay for spare parts | Likely | Minor | None | - | The availability of foreign exchange is difficult to predict as it depends on the macroeconomic situation of the country. But taking into account the problems in 2016-17 it can not be excluded. It is unlikely to affect the whole wind farm, but may affect some of the turbines for a significant period. |
| Lack of a grid code complicates the connection of the wind farm to the grid | Very unlikely | Major | Secure that EEP gives a proper specification in the tender documents | The risk is reduced significantly. | If the wind farm does not live up to the required standards, it may destabilize the grid. Even if no grid code is in place, EEP can during tender specify the technical specifications for the connection of the wind farm |

Institutional risks

| Risk Factor | Likelihood | Impact | Risk response | Residual risk | Background to assessment |
|---|---------------|--------|--|---|--|
| Corruption during the tender process. | Very unlikely | Major | Support to and close monitoring of the tender process | Insignificant as the safeguards will make it very difficult for corruption to take place. | Transparency and anti-corruption are on the top of the agenda for Danida and DBF. DBF will give non-objections to tender documents and the tender evaluation report, and the tender consultant will closely advise and monitor the process. |
| Inadequate consultation and compensation to the project affected people | Very unlikely | Major | Support to EEP in the process by the construction supervision consultant. Close monitoring by the consultant and the Danish Embassy. | The risk will still be there, but it will be minor. | DBF has a commitment to comply with the IFC guidelines. DBF has stressed the issue during project preparation and appraisal, and it will be in the ToR for both the tender consultant and the construction supervision. DBF will seek input from relevant NGO's to ensure that the ToR encompass relevant elements adequately. |

Annex 4. List of supplementary materials

Project Documentation

- /1/ Detailed Feasibility Study Report, Lahmeyer International, June 2017
- /2/ Environmental and Social Impact Assessment Report, Lahmeyer International, June 2017
- /3/ Concept note for Assela 100 MW Wind Farm. Danida Program Committee. November 2017.
- /4/ 92-gruppen. Forum for Bæredygtig Udvikling. Høringssvar til Danida Business Finance: Assela Wind Farm Ethiopia. 3. november 2017.

Government of Ethiopia

- /5/ GoE: Growth and Transformation Plan II (GTP II). 2015/16-2019/20.
- /6/ GoE: National Electrification Program. Implementaton Road Map and Financing Prospectus. 2017.
- /7/ GoE: Ethiopia's Climate-Resilient Green Economy Strategy.
- /8/ Proclamation on Land Expropriation. 15 July 2005.
- /9/ GoE: National Human Rights Action Plan. 2013 - 2015

EEP

- /10/ Ethiopian Power System Expansion. Master Plan Study. 2014.
- /11/ Annual Audited Report. 2014.

Other documents used

- /12/ National *Renewable Energy* Laboratory (NREL): 2015 Cost of Wind Energy Review, <https://www.nrel.gov>
- /13/ UN: *Universal Periodic Review*. Report of the Working Group on the Universal Periodic Review. Ethiopia. 10 January 2010.
- /14/ UN: Guiding Principles on Business and Human Rights. New York and Geneva, 2011.
- /15/ International Finance Corporation's Guidance Notes: Performance Standards on Environmental and Social Sustainability. January 1, 2012
- /16/ IFC Performance Standards on Environmental and Social Sustainability. Effective January 1, 2012

Annex 5. Plan for communication of results

The plan is to include support for elaboration of a communication strategy into the ToR for the DBF monitoring consultant, which will follow the project with periodic visits once the contractor has been selected and design and construction starts. The monitoring consultant will thus have an important role in assisting DBF and the Danish Embassy in Addis Ababa in the communication of the results, as will the communication advisor at the Danish Embassy. Support should be offered to deliver inputs to MOWIE

The continued updating of the IFU and Embassy web pages on the progress of the project will be the responsibility of each institution, but the monitoring consultant will deliver inputs for this updating, including photos. However, the other more elaborate communication products will be the responsibility of communication consultants that will be contracted for each specific product, e.g. videos or articles for news media. In particular, DBF will when the project has been handed over, consider the possibility of contracting a communication consultant to propose how the results can be communicated and to elaborate the communication material.

| What? (the message) | When? (the timing) | How? (the mechanism) | Audience(s) | Responsible |
|---|--|--|--|--|
| Denmark is bringing affordable renewable energy to Ethiopia. | <ul style="list-style-type: none"> • When contract is signed • When the wind farm is commissioned | <ul style="list-style-type: none"> • The IFU and Embassy web pages • Ethiopian media (TV, newspapers) • Selected Danish media | The (i) Danish, and (ii) Ethiopian public to ensure transparency and accountability of the use of the Danish development funds. | DBF in cooperation with the communication advisor at the Danish Embassy |
| The case of Ethiopia as a developing country expanding dramatically its electricity provision based exclusive on renewable energy – and Denmark’s contribution within wind. | <ul style="list-style-type: none"> • The timing is relatively open. Could be done during construction or after commissioning. | <ul style="list-style-type: none"> • Communication Company /Consultant hired to propose and elaborate the product – e.g. a video. | Mainly the Danish public, but another version could possibly also target the Ethiopian public. More specific audience could be a renewable energy audience in Denmark. | DBF in cooperation with the communication advisor at the Danish Embassy. |
| Danish companies providing green solutions to Ethiopia. | <ul style="list-style-type: none"> • The timing is relatively open. Could be done during construction or after commissioning | <ul style="list-style-type: none"> • Communication Company /Consultant hired to propose and elaborate the product – e.g. a video. | Private sector in Denmark and the Danish Public in general | DBF in cooperation with the Danish contractor. |

Annex 6. Process Action Plan for implementation

| Action/product | Deadlines | Responsible/involved Person and unit | Comment/status |
|---|--------------------|--|----------------|
| First draft, appraisal report, including a proposal for ToR for the tender support consultant. | 31 December 2017 | Appraisal Team | Done |
| Respond to appraisal comments and prepare document for final (UPR) approval | January 2018 | Appraisal Team / DBF | Done |
| Presentation to IFU Investment committee (BC) | April 2018 | DBF | |
| Presentation in the Council for Development Policy (UPR) for final approval | April 2018 | UPR | |
| Approval by the Minister for Development Cooperation | April 2018 | Minister for Dev. Coop. | |
| Preliminary agreement on the DBF credit to be signed by DBF and MoFEC stating the intention of Denmark and Ethiopia to enter into a loan agreement. | May 2018 | DBF/MoFEC | |
| Appraisal and approval of the Project by MOWIE and MoFEC | June 2018 | MOWIE/MoFEC/EEP | |
| Approval of the project by the Council of Ministers and presentation of the loan to the Parliament for approval. | July 2018 | MoFEC | |
| Approval of loan by the Parliament | August 2018 | MoFEC | |
| Procurement of Tender/Procurement consultant | May 2018 | DBF/EEP | |
| Preparation of pre-qualification and tender documents for the Wind Farm. This includes evaluation criteria. | May/June 2018 | EEP with support from DBF-appointed tender consultant. DBF must provide "No Objection" | |
| Shortlist Danish companies eligible to tender for the wind farm based on pre-qualification documents. | June 2018 | EEP in collaboration with DBF-appointed tender consultant. DBF must provide "No Objection" | |
| Tender of wind farm | July- October 2018 | EEP | |
| Tender evaluation. | October 2018 | EEP in collaboration with DBF-appointed tender consultant. DBF must provide "No Objection" | |
| Contract negotiation and award of Contract. | November 2018 | EEP in collaboration with DBF-appointed tender consultant. DBF must provide "No Objection" | |

| | | | |
|---|----------------------------|--|--|
| Signing of contract for the wind farm. | December 2018 | EEP | |
| Prepare loan documents and sign loan agreements | January 2019 | MoFEC, DBF and Danish commercial bank | |
| Preparation of pre-qualification and tender documents for the construction supervision consultant. This includes evaluation criteria. | July 2018 | EEP in collaboration with DBF-appointed tender consultant. DBF must provide “No Objection” | |
| Shortlist Danish companies eligible to tender for the construction supervision consultancy assignment based on the pre-qualification documents. | July 2018 | EEP in collaboration with DBF-appointed tender consultant. DBF must provide “No Objection” | |
| Preparation of ToR for construction supervision consultant | July 2018 | EEP in collaboration with DBF-appointed tender consultant. DBF must provide “No Objection” | |
| Tender for construction supervision assignment | July-September 2018 | EEP | |
| Tender evaluation, construction supervision assignment. | September 2018 | EEP in collaboration with DBF-appointed tender consultant. DBF must provide “No Objection” | |
| Contract negotiation and award of Contract for the construction supervision assignment. Signing of contract. | November / December 2018 | EEP in collaboration with DBF-appointed tender consultant. DBF must provide “No Objection” | |
| Following the formal approval procedures, the contract and the loan becomes effective | February 2019 | DBF/MoFEC | |
| Detailed design and construction | March 2019 – February 2021 | Contractor and Supervision Engineer. Monitoring by DBF consultant. | |
| Completion of Project | 28 February 2021 | Contractor and Supervision Engineer. Verification by DBF consultant. | |
| End of Defect Liability Period | 28 February 2023 | Contractor and Supervision Engineer. Verification by DBF consultant. | |
| Decommissioning of the Assela Wind Farm | 2041/2046 | EEP | |

Annex 7. Appraisal recommendations and follow-up actions taken

| Rec. # | Recommendation | Responsible | Action |
|--------|--|--|--|
| 1 | As recommended in the Feasibility Study, it should be included in the tender documents that the contractor during final design shall verify that the transmission line has the capacity to evacuate the power produced by the wind farm, considering the correct active and reactive power injected into the grid. | EEP with support from the tender consultant | The task has been included in the ToR for the tender consultant |
| 2 | It is recommended to EEP and the Danish Embassy to monitor closely the issue of curtailment of the wind farms, and to follow up on the issue up with MOWIE and the other development partners in the Energy Sector Working Group. The possibilities for further support from the Danish wind energy thematic programme to address the issue should be analysed. | EEP and the Danish Embassy | Energinet.dk has made a short note on the issue on request from The Danish Embassy. The issue has been flagged in the Danish Thematic Programme and in particular the TA to be delivered by Energinet.dk. The Danish Embassy shall raise the issue in the Energy Sector Working Group. |
| 3 | It is recommended to revise the training package during tender preparation to make sure it is sufficient. It is furthermore recommended that EEP include key staff that will subsequently be responsible for the operation of the Assela wind farm in the PMU so that some of the O&M staff will have a more profound knowledge of the plant. | EEP with support from the tender consultant | The task has been included in the ToR for the tender consultant EEP has agreed that when setting up the PMU it will ensure that O&M staffs are included in the PMU. |
| 4 | EEP should, with support from the international tender consultant, ensure that the financial part of the tender evaluation in principle is based on the Levelized Cost of Energy, i.e. that it, apart from the capital expenditure, takes into account the predicted annual energy output and the predicted operation and maintenance costs, and that the claims made by the bidders are objectively verifiable. | EEP with support from the tender consultant | EEP shall make sure this is included in the tender documents. |
| 5 | Taking into account the uncertainty regarding soil conditions in the Assela area and to avoid excessive costing of this risk, the AT recommends that the tender documents permit for the bidders to work with (and price) different scenarios for the foundations for the towers. | EEP with support from the tender consultant | It has been made explicit in the ToR for the tender consultant that when making the ToR for the Construction Supervision Consultant these issues should be made clear as part of the scope or work. |
| 6 | It is recommended that the project, as part of the Corporate Social Responsibility, in coordination with the Rural Electrification Programme ensures that all the villages in the area have access to electricity before the wind farm is commissioned. Monitoring of this should be included in the ToR for the Construction Supervision consultant. | EEP with support from the construction supervision consultant. | The Danish Embassy shall monitor closely that recommendations 6-8 are actually followed by EEP. |
| 7 | It is recommended, as part of the Corporate Social Responsibility, to ensure that the families affected by the land acquisition for the Assela Wind Farm are given preference for employment at the wind farm, according to the principle of livelihood restoration. Monitoring of | EEP with support from the construction | |

| Rec. # | Recommendation | Responsible | Action |
|--------|---|--|--------|
| | this should be included in the ToR for the Construction Supervision consultant. | supervision consultant. | |
| 8 | After the final design has been made, and before the land acquisition starts, EEP shall present to DBF a detailed land acquisition and compensation plan., including a Livelihood Restoration and Resettlement Action Plan, according to IFC standards. The close monitoring and reporting regarding the implementation of the plan shall be the responsibility of EEP, but the Construction Supervision Consultant twill have a separate responsibility to provide technical assistance to EEP, monitor progress and report to EEP and DBF, as well. | EEP with support from the construction supervision consultant. | |

Annex 8: General introduction to Danida Business Finance

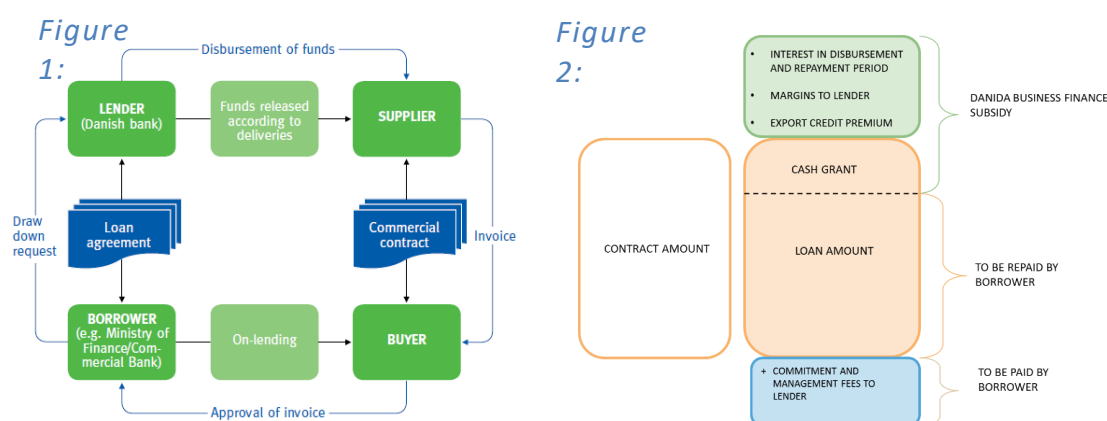
Program mission and vision

Danida Business Finance, DBF, is a soft loan scheme that blends development aid funds with commercial bank loans. DBF is guided by a set of guiding principles that, among other includes the following mission: *The facility is: i) an integrated part of the overall Danish development assistance, ii) is demand driven, iii) eases the terms of repayment for the borrowing developing countries, iv) contributes to raising private capital for financing of development projects in selected developing countries, v) supports development projects which can neither be financed on ordinary commercial terms nor with grant assistance, vi) complements other Danish financed activities for the benefit of the recipient countries, and vii) actively involves the Danish private sector.*

Regulation and set-up

The program is tied to Danish companies in the sense that only Danish companies can participate in the tender of DBF projects. There is no requirement to Danish content in the contracts. DBF is regulated by OECD regulations for tied aid credits which, among other, stipulate that a minimum subsidy of 35% (50% for LDC) is required. OECD regulations also stipulate that tied aid credits can only be extended to developing countries with GNI per capita of maximum USD 3.955 (2017/18) and only projects that are non-commercially viable can be financed.

The program resembles a normal export credit, as illustrated in figure 1.



The commercial bank provides a normal interest-bearing loan with 10 year tenor. The DBF subsidy covers all the interest on the loan, including margins to the bank. DBF also provides a cash grant that is used to reduce the principal loan amount to be repaid by borrower. The elements of the DBF subsidy is illustrated in figure 2.

The cost of the export credit premium is covered by DBF and therefore included in the DBF subsidy calculations (calculations to reach 35 or 50% concessionality). However, as the guarantee in effect is covered by the aid budget the premium is not paid out to EKF, who issues the guarantee to lending bank on behalf of Ministry of Foreign Affairs. The export credit premium is therefore not included in the appropriation as it will only materialise in case of actual default.

Budget and payments

The DBF subsidy is disbursed over several years according to disbursements under the loan. This way, DBF may finance larger projects where the total subsidy surpass the annual DBF budget.

Annex 9 - Quality Assurance checklist for appraisal of programmes and projects¹

File number/F2 reference: F1744-01 / _____

Programme/Project name: Assela Wind Farm Project

Programme/Project period: 2018-23

Budget: DKK Million 731.6

Presentation of quality assurance process:

The project has been appraised by PEM Consult, including a field visit to Ethiopia from November 27th 2017 to December 4th 2017.

- ✓ The design of the programme/project has been appraised by someone independent who has not been involved in the development of the programme/project.
- ✓ The recommendations of the appraisal has been reflected upon in the final design of the programme/project.
- ✓ The programme/project complies with Danida policies and Aid Management Guidelines.
- ✓ The programme/project addresses relevant challenges and provides adequate responses.
- ✓ Issues related to HRBA/Gender, Green Growth and Environment have been addressed sufficiently.
- ✓ Comments from the Danida Programme Committee have been addressed (if applicable).
- ✓ The programme/project outcome(s) are found to be sustainable and is in line with the partner's development policies and strategies. Implementation modalities are well described and justified.

¹ This Quality Assurance Checklist should be used by the responsible MFA unit to document the quality assurance process of appropriations where TQS is not involved. The checklist does not replace an appraisal, but aims to help the responsible MFA unit ensure that key questions regarding the quality of the programme/project are asked and that the answers to these questions are properly documented and communicated to the approving authority.

- ✓ The results framework, indicators and monitoring framework of the programme/project provide an adequate basis for monitoring results and outcome.
- ✓ The programme/project is found sound budget-wise.
- ✓ The programme/project is found realistic in its time-schedule.

Comments:

- Other donors involved in the same programme/project have been consulted, and possible harmonised common procedures for funding and monitoring have been explored.

Comments: N/A

- ✓ Key programme/project stakeholders have been identified, the choice of partner has been justified and criteria for selection have been documented.
- ✓ The executing partner(s) is/are found to have the capacity to properly manage, implement and report on the funds for the programme/project and lines of management responsibility are clear.
- ✓ Risks involved have been considered and risk management integrated in the programme/project document.
- ✓ In conclusion, the programme/project can be recommended for approval:
yes

Date and signature of desk officer: 03/4-18 Lone Boge Jensen

Date and signature of management: 03/4-18 Lis Rosenholm

