Ethiopia:
FOREX Prioritization Study

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Africa Clean Energy
Catalysing Africa's Solar Markets

TETRA TECH
International Development

UKaid
from the British people

Foreign, Commonwealth and Development Office (FCDO)
Africa Clean Energy Technical Assistance Facility

Tetra Tech International Development

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CONTENTS

ABBREVIATIONS AND ACRONYMS

Acronym	Definition
ACE TAF	African Clean Energy Technical Assistance Facility
AECF	African Enterprise Challenge Fund
AfDB	African Development Bank
CBE	Commercial Bank of Ethiopia
DBE	Development Bank of Ethiopia
DP	Development Partners
ECC	Ethiopian Customs Commission
EEU	Ethiopia Electric Utility
EMA	Energy Market Accelerator
EnDev	Energizing Development
FDI	Foreign Direct Investment
ESEDA	Ethiopian Solar Energy Development Association
FCDO	Foreign Commonwealth and Development Office
FOREX	Foreign Exchange
GDP	Gross Domestic Product
GoE	Government of Ethiopia
GTP	Growth and Transformation Plan
IFC	International Finance Corporation
IMF	International Monitory Fund
KII	Key Informant Interview
MFI	Micro Finance Institution
MoF	Ministry of Finance
MoPD	Ministry of Planning and Development
MoTRI	Ministry of Trade and Regional Integration
MoWE	Ministry of Water and Energy
NBE	National Bank of Ethiopia
NEP	National Electrification Program
OGS	Off-grid Solar
PAOP	Power Africa Off-Grid Project
PAYG	Pay-As-You-Go
REBs	Regional Energy Bureaus
SAS	Stand-Alone-Solar
SHS	Solar Home System
WB	World Bank

EXECUTIVE SUMMARY

Ethiopia has high solar energy generation potential and solar market specially in the rural scattered settlement areas where on-grid power supply is infeasible and unattainable, at least in the medium term. There has been a growing demand for solar energy, especially stand-alone solar (SAS), in rural areas. Moreover, the government of Ethiopia has a Universal Electrification Access program which is to be achieved by 2025. However, the solar energy sector has not been given priority status for FOREX which is impeding importation and distribution of the products to meet household demand, and hence to achieve Ethiopia's universal access targets.

The objective of the FOREX Prioritization for Stand-alone Solar study is to identify regulatory impediments and gaps in access to FOREX for the importation of SAS products and the ability of companies to pay foreign currency-denominated loans, and then to produce evidence which shows that prioritizing the access to foreign currency for solar product importers will help enable Ethiopia to realize universal electrification targets. To achieve the stated objective, the methodology employed was collecting secondary and primary data including a detailed review of FOREX allocations and foreign currency dominated loans related policies; a review of energy policy and national development plans such as the National Electrification Program (NEP) 2.0; an evaluation of commercial banks' credit policy; and one on one consultations and multistakeholder workshops.

Key Study Findings

There is a **gap between priorities in Ethiopia's Ten-year Perspective Development Plan and governments financial and FOREX priorities.** The Development Plan states that the off-grid solar subsector is one of the alternative sources of energy given priority for Ethiopia to develop. However, this Plan is not supported by favoured access to domestic or foreign loans, or access to FOREX for the importation of SAS products and inputs for manufacturers and assemblers of SAS solutions.

The **National Bank of Ethiopia's (NBE) current FOREX allocation policy does not clearly show SAS product importation as the priority for FOREX access or for foreign currency-denominated loans and suppliers' credit.** According to NBE directives, access to foreign loans and suppliers' credit is the exclusive right of exporting firms and Foreign Direct Investment (FDI) companies.

Once the Ethiopian Government's FOREX credit facility at the Development Bank of Ethiopia (DBE) was depleted SAS products were not designated as a priority for FOREX by the NBE and importing SAS has become challenging. While the DBE through the World Bank credit facility was providing FOREX and domestic credit for importers and distributors as well as consumer financing loans for end-users through MFIs the sector saw an upward trend in the performance of SAS importation and distribution.

The Ministry of Finance plans and implements solar projects only under a private-public partnership (PPP) arrangement. Currently, **large solar projects defined as PPP are getting priority access to FOREX by the MoF,** and solutions from smaller solar energy private sector companies are not considered for FOREX priority by the MoF.

The NBE board prioritizes and reprioritizes FOREX allocation among different sectors as the situation demands and based on the FOREX availability. According to NBE, FOREX priority setting follows a national plan, which is prepared by the Ministry of Planning and Development (MoPD). In the case of SAS products, **the MoWE, the sectoral ministry accountable, did not submit their respective development plan, priorities and targets to the MoPD.**

A lack of priority access to FOREX for the SAS sector is simultaneously affecting the provision of domestic credit. Banks can finance what can be procured by local currency, but companies have limited access to FOREX for imported components required.

The impact of **lack of sufficient FOREX access for SAS products have led to increased product prices** due to the small amount of inventory that companies can afford to import at any given time. Distributors sell products at a higher price so as to cover companies' operating costs.

GoE regulations prohibit foreign companies from participating in the distribution, wholesaling, and retailing business in Ethiopia. All respondents consulted believe that this will have adverse effects small local business as foreign companies would replace retailors in the business and put pressure on FOREX since they would repatriate profit back to their home country.

There are many global and regional funds supporting the development of renewable energy sources in Ethiopia. The problem **hindering effectiveness of such grants is that the grants flow from donors to local SAS firms and are subject to a 70 percent surrender requirement** by the National Bank of Ethiopia.

Recommendations

The topic of access to FOREX in Ethiopia is quite complex to say the least. The study attempted to take into consideration all the different perspectives across government agencies involved. However, the recommendations that follow are based on improving the access to FOREX for the stand-alone solar sector specifically.

- Revise the current NBE FOREX allocation directive by **reducing the surrender requirement from 70 percent to 50 percent** for local exporters and remittances recipients. These companies will have 20% more foreign currency to import and distribute SAS products. This will also improve the companies' ability to effectively utilize grants provided by donor organizations and encouraged to mobilize further support from donors willing to support the SAS sector.
- Since the alternative energy sector is considered as priority in the national and sectoral development plans, **aligning priorities in FOREX allocation and foreign and local credit allocations is suggested to achieve universal energy targets.** The Ministry of Finance (MoF), Ministry of Water and Energy (MoWE) and the National Bank of Ethiopia (NBE) - key stakeholders effecting the policy in the SAS sector should collaborate and align priorities for financing and FOREX access for the SAS sector.
- To contain SAS product price increases due to small amounts of inventory being imported, **NBE has to allow some degree of access to suppliers' credit and foreign loans for SAS products** by taking into account the capacity of the company to repay the loan on a case-by-case basis.
- Since **local SAS manufacturing and assembly is currently limited, FOREX priority should be given to SAS importers.**

1. THE ECONOMY

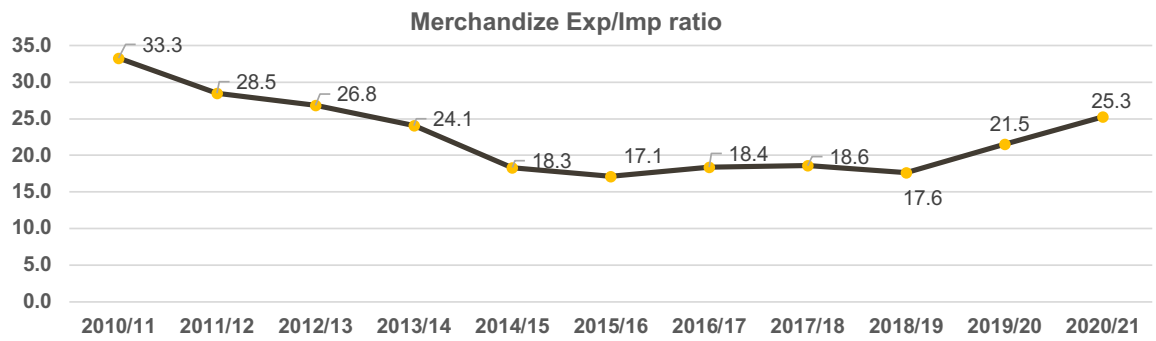
The Ethiopian economy continued to register growth in 2020/21 amid instability in the different parts of the country and the continued impact of the COVID-19 pandemic. Real GDP showed a 6.3 percent growth in 2020/21, which is slightly higher than the 6.1 percent growth registered during the preceding year. But 3.7 percentage points lower than the growth target set in the Ten Years Development Plan for the same fiscal year. Nominal GDP per capita stood at US 1,092 Dollars, depicting a 1.1 percent marginal improvement over the preceding year[1]. IMF's economic growth forecast for the year 2022/23 is gloomy. Similarly, Ethiopia's short- to medium-term growth outlook is not good since resources would be channelled towards an economic recovery program.

Another key indicator of the dismal performance of the economy is inflation. In 2020/21, annual average inflation stood at 20.2 percent, food & non-alcoholic beverages inflation was 23.2 percent, while non-food was 16.4 percent. The registered inflation rate is 2.5 times the target set for the budget year of 8 percent. This is happening despite tight monetary policy measures pursued by GoE[2] .

The overall balance of payments registered USD 298.7 million in surplus in 2020/21 compared to USD 833.4 million deficit a year earlier, owing to a lower deficit in merchandise trade, recovery of service account balance, and higher net private transfers despite a decline in net official transfers and net capital account inflows. Services account registered USD 29.7 million in surplus in 2020/21 in contrast to a USD 219 million deficit during the preceding fiscal year. Besides, net private transfers increased by 18 percent, while official transfers declined by 10.2 percent. As a result, the current account deficit (including official transfers) showed a 28.3 percent contraction to USD 3.2 billion, and its share in GDP stood at 2.8 percent[3].

Other countries' experience shows that exporting serves as an engine of growth. In cognizance of its importance, the GoE has been promoting the export sector for more than two decades by providing special incentives for those in the sector. However, the registered performance has not been encouraging measured in terms of 1) the number of items being exported, 2) the shift away from primary to exporting processed goods, 3) exports which cover the import demands of the country, 4) export as a ratio of GDP and 5) per capita exports. For instance, the ratio of merchandize export to merchandize import bills has shown a downward trend over the last ten years. Merchandize export which used to cover 33.3 percent of merchandize import in 2010/11 has declined to finance by only 17.6 percent in 2018/19. However, slight improvements were registered in 2020/21. This in turn, was mainly due to reduced imports by rationing FOREX for only essential goods (see figure 1).

Figure 1: Trends in merchandize export to import ratio



Source: calculated based on data from NBE Annual reports (various issues)

1 *NBE, 2020/21 Annual Report*
2 *Ibid*
3 *NBE, 2020/21 annual report*

The overall relative decline in the performance of export earnings of the country has seriously affected importing businesses. Since the supply of FOREX is limited, the government has embarked on rationing the available meagre FOREX resources by crafting FOREX allocation formula and frequently revising it depending on the availability of FOREX. Currently, the country's reserve position is at its record low, falling lower than the minimum standard of 3 months of import, thereby compelling the National Bank of Ethiopia (NBE) to take drastic measures on the mobilization and allocation of FOREX.

The ongoing conflict in the different parts of the country has not only reduced economic growth and soared inflation, but it has also seriously reduced FOREX generation for country due to reduced merchandise export earnings, limited loan and assistance flow from development partners, reduced remittance flow through legal banking channel in turn due to increase transactions between official and parallel market exchange rate, reduced Foreign Domestic Investment flows into the country. Availability of FOREX is critical to financing essential commodities and technology imports into the country, which is used to build the country's productive capacity and transform the economy.

Owing to the impacts of the devastating conflict in the Northern part of the country, the COVID-19 pandemic, and mounting external pressures on Ethiopia mainly due to the war in the Northern part of the country, the Ethiopian economy is in a dire condition. To this end, the GoE prepared a short term, Three-Year Economic Recovery Plan to be implemented over the period (2022/23- 2024/25)[4]. This recovery plan, like the Ten-Year Perspective Plan (TYPP), considers agriculture, manufacturing industry, mining, tourism, and ICT sectors as the main driving forces for Ethiopia's economic development. The Recovery Plan has less focus for the energy sector, especially alternative renewable energy sources.

4 *MOPD, Three- year Economic Recovery Plan (2022/23-2024/25)*

2. THE CONTEXT

Ethiopia is endowed with a variety of renewable energy resources and the sources of energy potential for the country are prioritized in order of importance as follows: i) hydroelectric power generation, ii) geothermal energy, iii) Wind Power, and iv) solar energy. For solar energy, the national average radiation received at ground level is estimated at 5.2 kWh/m2 per day. However, this potential varies from season to season, with the lowest potential being 4.55 kWh/m2 per day and the highest potential being about 6.25 kWh/m2 per day (ENEP, 2012).

A decentralized off-grid solar energy supply was promoted during Growth and Transformation Plan II (GTP II) plan implementation period. GTP II focuses on expanding renewable energy sources which are clean and carbon-free, including hydropower, wind energy, geothermal energy, and solar energy sources, on fulfilling the energy demand of the country[5] .

According to GTP II, the major targets were:

- Increase the power generating capacity of the country from 4,180MW in 2014/15 to 17,208MW by 2019/20; of which 300MW is planned to be generated from solar power, and;
- Producing 3,600,000 solar lanterns, 400,000 household solar PVs, 3600 institutional solar PVs, 500 solar thermals, and 3,600 solar cookers are also an integral part of the targets to be achieved by 2019/20.

The Implementing strategies were:

- Raising the capacity of domestic contractors and micro and small-scale enterprises involvement to supply the required inputs and save foreign currency; creating favourable conditions for those working in the manufacturing area to participate in the energy sector.
- Identifying possible domestic and international sources of finance and utilizing them efficiently creates favourable conditions for the private sector to participate in the energy sector as the policy permits.
- In the area of alternative energy sources, the implementation strategies will focus on capacity building, technical support, and monitoring, providing incentives and support by expanding the market and promotion.

The GoE launched its 'National Electrification Strategy' (NES) in June 2016. The NES defined the strategic priorities for sustainable energy sector development and scaling up electrification. The NEP was launched in November 2017 and supported the implementation of the electrification program and carried out in phases based on a least-cost, spatial-proximity targeting methodology. The NEP takes a comprehensive approach to electrification through a balance of on-grid and off-grid service provisioning as well as public and private sector-led interventions.

The NEP is organized into three pillars addressing the dominant challenges of the sector: Pillar 1: On-grid electrification; Pillar 2: Off-grid service provisioning; and Pillar 3: Sector capacity and institutional reform. Each of the pillars provides a specific menu of activities to be carried out to reach universal electrification.

Since the on-grid connection expansion will be a multi-decade undertaking, support for sustainable and affordable off-grid service provision (for example, SAS or mini-grid systems) will be implemented under the NEP alongside the on-grid connection program. Pillar 2 of the NEP targets communities the grid would not reach within the next 5–10 years (pre-electrification) and communities for which the grid is not the least-cost solution (permanent off-grid). These both include stand-alone solar systems.

5 GTP II

The Plan considers stand-alone solar system and targets the rollout of solar photovoltaic (PV) systems through a combination of public and private sector-led approaches. The private sector would be supported by a combination of market development support and access to finance programs (such as credit facilities provided by the DBE). In remote areas of the country, where the private sector has not established distribution channels, public programs will be implemented, for instance, through the Ethiopia Electric Utility (EEU)or the MoWE. The implementation modalities for public and private provision of SAS will be defined in the planned off-grid strategy which is under development as part of the NEP.

Ethiopia aims to reach universal electricity access by 2025 in accordance with the National Electrification Program (NEP). The Government of Ethiopia (GoE) launched the NEP in November 2017, which includes the action plan for achieving universal electricity access nationwide by 2025. By 2025, 65 percent and 35 percent of access provision are targeted with grid solutions and off-grid technologies (solar off-grid and mini-grids), respectively. By 2018, only 11% of households had access to off-grid solar sources, including solar lanterns and home systems.

In 2021, GoE prepared the Ten-Year Perspective Plan (2021-2030), titled the Beacon of the African Economy, which is the overriding development plan guiding the development of the country. The plan preparation followed top-down and bottom-up approaches, whereby macroeconomic policies and targets are set by macro institutions while sectoral plans and targets are prepared by sectoral ministries and submitted to the Ministry of Planning and Development (MoDP) where consolidation, rationalization and prioritization and reprioritization of activities takes place. In GTP II, the plan was to achieve universal electrification access, using a hybrid of the grid and off-grid connections by 2025. While according to the new TYDP, Ethiopia plans to achieve universal electrification access, using a hybrid of the grid and off-grid connections by 2030.

3. METHODOLOGY

Objective

The objective of the study is to produce evidence which shows that granting priority access to FOREX for solar product importers will help enable Ethiopia to realize the universal electrification access by 2025 through the distribution of off-grid solar technologies for both households and productive use.

To achieve this, the consultants carried out the following.

- Identified FOREX allocation regulatory gaps for importers of SAS products, including regulations limiting the importation of goods as well as those regulations that impact the payback of foreign currency-denominated loans;
- Developed an evidence based on analytical report on the current supply of SAS products (import and locally assembled) and made demand forecasts
- Estimated the amount of FOREX required to meet the SAS target and recommend regulatory changes to fill the hard currency gap;Develop an action plan/road map to facilitate the advocacy engagement to improve the likelihood that the report recommendations are implemented, and access to FOREX is fully resolved for SAS products;

Primary and Secondary Sources

The primary data sources for this study are generated from conducting one-on-one consultations with individual respondents and stakeholder group consultations by organizing a workshop. The one-on-one consultation generated primary data from at least a respondent drawn from each relevant stakeholder institution working on the energy sector and financing the sector. To this end, consultation guiding questions was prepared and administered. The institutions from which respondents were drawn include, MoWE, NBE, MoF, MoPD, Development Bank of Ethiopia, AECF, World Bank, AfDB, selected MFI and Commercial banks, SAS manufacturers and assemblers, SAS importing private companies, associations supporting the development of solar energy in the country, ESEDA.

The secondary sources are study reports, government policy papers, plan documents, and secondary data generated by other organizations and researchers. The list of consulted studies is referenced in the annex. From the secondary data collected from the Ethiopian Customs Commission (ECC) and the Ministry of Trade and Regional Integration, the study generated time series numerical evidence on the number and value of SAS products imported. From different study reports, an attempt was made to get evidence on productivity, income, and employment benefits that will accrue from using off-grid solar power for productive uses.

After having completed the desk research and one-on-one interviews, a group consultation was held among multiple stakeholders drawn from the same institutions. The study identified key institutions, departments within the institutions and consulted the director of the identified department guided by questions prepared to solicit information from respondents on the subject matter. The guiding questions were prepared in such a way to collect qualitative and in-depth information that the study can't obtain from desk research. In order to have a comprehensive understanding and perspective attempt was made to contact at least one representative of each identified relevant institution.

In the workshop, the objectives of the study were presented, and key findings from desk research and one on one interview findings were presented and discussed. The participants raised questions and comments and the information obtained during the workshop were considered when finalizing this report.

4. REVIEW OF ENERGY SECTOR POLICIES, REGULATIONS, AND PLANS

Energy Sector Policies and Regulations

The energy policy of Ethiopia has explicitly stated that the country will fulfill its energy needs only from renewable resources. The description, recent activities, and relevance of the policies and regulations to the SAS energy sector are given in table 1.

Table 1. Energy policies/ regulations, description and recent activities, and relevance to SAS

Policy/Regulation	Description and recent activity	Relevance to the SAS sector
National Energy Policy (Draft, 2018)	Issued to update the 2013 One Energy policy. Includes current developments in energy generation (geothermal projects, waste to energy plant in Addis, and progress made to extract and export natural gas) and growth in transmission lines.	The policy stipulates increasing access to electricity through on-grid and off-grid technologies, providing incentives for private investment in off-grid electrification, and facilitating financing for renewable technologies.
Investment Regulation No. 474/2020	As part of the negative listing approach, it provides three categories of investment areas: (i) Areas are exclusively reserved for joint investment with the government. (ii) Areas exclusively reserved for domestic investors. (iii) Area exclusively reserved for joint investment with domestic investors. Foreign investors are allowed to invest with the government and domestic investors jointly, but import, wholesale and retail businesses are reserved for domestic investors only.	Foreign companies are not allowed to engage in the import, wholesale, and retail of SAS products.
Licensing and Authorization of Payment Instrument Issuers Directive No. ONPS/01/2020	Allows local financial institutions (banks and MFIs) and non-financial institutions to engage in electronic payment and money transfer services previously reserved for banks and MFIs only.	Mobile Network Operators (MNOs) are not allowed to set up financial accounts to provide mobile payment services. This restriction is easing with the government allowing Safaricom to provide a mobile payment system.
Quality control	Ministry of Trade and Regional Integration (MoTRI) is mandated to control the compliance of goods with the Ethiopian standards and take measures against those found to be below the standards. Oversees the coordinated enforcement of standards by other enforcement bodies.	MoTRI has temporarily delegated its responsibility to Ethiopian Conformity Assessment Enterprise (ECAE) to control the services of PVoC agencies.
Import duties and taxes	The memorandum of understanding signed by the Ministry of Finance in 2010 allows Lighting Africa-certified products to be imported duty-free. However, it is not uniformly implemented to components and parts and lacks clarity. Firms venturing into PAYGo systems are facing financial constraints as they are required to file VAT every month (or every three months for taxpayers whose annual turnover is less than ETB70 million, which is USD 1.8 million) for credit sales they expect to collect over several months.	Productive use appliances, components, parts, and products new to the market like solar TVs are sometimes incorrectly classified and made liable to tax. The government recently introduced 5% duty on imported solar products. Reducing the working capital and turnover of SAS companies using PAYG may face cash flow problems.

Energy Sector Plans

The Ten Years Perspective Development Plan (TYPP 2021-2030) emphasizes the generation of sustainable and affordable electricity to support the fast-growing national economy. Currently, the national electricity coverage has reached about 44%; 33% comes from the national grid whereas 11 % comes from the off-grid solutions.

Over the past years, the government has set the stage to increase the penetration of off-grid technologies, taking essential measures to deregulate the market and establish an enabling environment in line with best practices. Recent years witnessed an acceleration of regulatory initiatives aimed at supporting the establishment of an enabling ecosystem for the scale-up of off-grid solutions (NEP II, 2019).

5. FOREIGN EXCHANGE, FOREIGN LOANS, AND SUPPLIERS CREDIT POLICIES

Following the change in the economic management system of the country in May 1991, the foreign exchange regime was liberalized gradually. Of the relevant foreign exchange Directives and Guidelines, this study reviews the most relevant.

The National Bank of Ethiopia (NBE) is mandated to i) formulate and implement exchange rate policy, ii) manage international reserves, iii) set limits on foreign exchange assets that banks can hold, and iv) set limits on the net foreign exchange position of banks.

The NBE controls foreign exchange transactions under the Bank of Ethiopia Establishment Proclamation and associated Directives, Guidelines, and Letters (FNG 2008: 4181). The Proclamation provides wide-ranging authority and allows for the:

1) Banning of transactions of foreign exchange except with banks or authorized dealers;
2) Imposition of terms, conditions, and limitations under which residents and non-residents can possess and utilize foreign currency or instruments of payments in foreign exchange;
3) Imposition of terms and conditions for the transfer of foreign exchange to and from Ethiopia and the settlement of any foreign exchange that results from export, import or transfer;
4) Import or export of valuable goods or foreign exchange to be disallowed unless conditions, circumstances, and terms determined by NBE are fulfilled; and,
5) Monitoring of foreign exchange transactions of banks by NBE.

Directive no. FXD/57/2018, Transparency in Foreign Exchange Allocation and Foreign Exchange Management, issued in September 2018:

As the foreign currency shortage worsened, the NBE introduced foreign currency allocation requirements to direct foreign currency with the ambition of i) maintaining the stability and credibility of the banking system, ii) protecting the goals of the GTP II, and iii) enhancing transparency in foreign currency allocations.

Directive no. FXD/57/2018 requires a bank's board of directors to implement foreign exchange operations management guidelines that conform to NBE's Directives. The Directive also ensures bank records and the minutes of Allocation Committee meetings to a assess compliance with the guidelines, including up-to-date information on foreign exchange purchase requests and allocations made.

The Directive distinguishes between foreign currency requests for essential imports (previously called priority imports), non-essential imports (previously called non-priority imports), and requests for which foreign exchange must be sold on demand. Highest priority requests that are exempt from registration procedures and where a currency should be sold on demand include:

1) Foreign currency requests from foreign employees;
2) External debt repayments (the loans need pre-approval under FXD/47/2017 (NBE 2017 (2)) and supplier credits;
3) Invisible payments which include payments to Ethiopian diplomatic missions, aviation services, and licensed transit companies, etc.
4) Foreign exchange bureau requests (under FXD/17/2001); and,

5) Foreign currency requests from non-resident foreign currency transferable Birr accounts, retention accounts (under Directive 47/2017) and foreign currency accounts of non-resident Ethiopians and those of non-resident Ethiopian origin.

Second, in line for foreign currency priority access were essential imports. Of the foreign currency allocated to imports by banks, FXD/51/2017 dictated that at least 40% must be directed to essential imports. Directive no. FXD/57/2018 issued in September 2018 raised this percent to at least 50%. If the amount destined for essential imports is less than 50%, the difference must be surrendered to the NBE at the mid-rate.

Applications for foreign currency for essential imports should be registered and served on a, first come first served basis, within three levels of priority.

- First priority: a) fuel; b) pharmaceuticals;
- Second priority; a). input for agriculture (fertilizer, seeds, pesticides, and chemicals); b. input for manufacturing (raw materials and chemicals);
- Third priority: a) motor oil, lubricants, and gas; b) agricultural inputs and machineries; c). pharmaceutical products (laboratory equipment and medical equipment); d) manufacturing business's requests for procurement for machines, spare parts etc.; e) imports of nutritious foods for babies; f) spare parts for construction machines; g) educational materials (exercise books, ball pen, and pencils and printing papers); h) profit and dividend transfer (under the Investment Proclamation); i) transfer of sales from foreign airlines, and j) sales from the share and liquidation of companies from foreign direct investment (FDI) (under the Investment Proclamation).

Directive no. FXD/48/2017, Retention and Utilization of Export Earnings and Inward Remittance assists exporters of goods and services in importing and paying external debts. Recipients of foreign exchange and exporters can still open foreign exchange retention accounts. The portion of earnings that can now be held indefinitely in Retention Account A increased from 10% to 30%. The remaining 70% can be held in Retention Account B for a period of 28 days before it is transferred into Birr. These accounts can only be used to finance business-related payments such as imports of goods, excluding vehicles, paying external loans, payments to tour operators, payments to conference centres, and Payments for consultants.

Directive FXD/72/2021 requires all beneficiaries to surrender 50% of the foreign currency earnings to the NBE. However, as the FOREX reserve depleted, **Directive no. FXD/79/2022,** the retention and utilization of export earnings and inward remittances, requires all beneficiaries to surrender 70% of the foreign currency earning to the NBE and retain only 20% of their export earnings in foreign currency indeterminately in a retention account. The remaining 10% is surrendered to the client's bank at the prevailing buying exchange rate immediately after the day of receipt. In other words, beneficiaries have to immediately exchange 90% of their hard currency earnings (70% to NBE and 10% to CBE) into ETB and are left only with 10% of earnings to use for their import needs. This is expected to reduce the FOREX access to many importers of solar products.

Before the issuance of Directive FXD/50/2017, banks were required to surrender foreign exchange to NBE that was in excess of meeting their day-to-day needs and commitments falling due within three months. Directive FXD/50/2017 issued in October 2017 required that banks should surrender 30% of their foreign exchange earnings to NBE at the buying rate within the first five working days of the following month. Under Directive no FXD/54/2018, starting from late August 2018, the purchase of the surrendered foreign currency was valued at the mid-rate rather than the buying rate, thereby making the commercial banks benefit from the surrender by increasing the Birr amount paid by NBE.

The surrender of foreign exchange by banks to NBE limits the amount of foreign exchange that is available to banks that would finance imports of private businesses, especially non-priority/non-essential imports.

Directive no. FXD/55/2018, non-resident Ethiopians and non-resident Ethiopian origin accounts aims to encourage non-resident Ethiopians to spend and save their foreign currency in Ethiopia. The Directive allows

individuals and enterprises that are non-resident Ethiopians (Ethiopian nationals living, or planning to live, abroad for more than one year) or non-resident foreign nationals of Ethiopian origin (non-resident foreign nationals with identification cards attesting to the Ethiopian origin) to open foreign currency accounts in Ethiopia. The Directive tightens up the opening of accounts and deposits into non-resident accounts. Non-residents are now required to submit documents confirming that they are, or are planning to, live and work overseas for more than one year (365 days) and that these documents are subject to renewal. Foreign currency is now only allowed to be credited by the account holder with funds transferred or originating from the place of residence.

Council of Ministers Regulation No. 88/2006 Franco Govern Valuta: The importation of goods on a Franco valuta basis is restricted to use by i) diplomatic missions (such as goods imported with donor money) and ii) businesses that are 100% foreign-owned. Technically its use by businesses is restricted to machines up to the commissioning stage or for key spare parts. However, in practice, NBE also permits it for wider purchases by key businesses.

Supplier credit scheme NBE **Directive 47/2017** allows importers to receive goods from suppliers on short-term credit terms provided the business is either i) a domestic business which is both an exporter and the loan is going to finance an exporter or ii) a 100% foreign-owned entity with a debt-equity ratio of no more than 60:40, with clear loan repayment arrangements and purpose. Loan interest rates are capped by the Directive. Each application is considered case by case, and banks state that it is unusual for NBE to approve terms longer than six months.

6. FORECASTING SAS NUMBER AND FOREX NEED

NEP 2.0 states that universal electricity access will be achieved by 2025, whereas the TYDP sets a target date for 2030. With regards to forecasting, this study depends on analysis and forecasts previously done by other organizations.

Projected Annual Coverage

The universal electrification access, according to NEP, was planned to be achieved by 2025. According to the program, both on-grid and off-grid sources are planned to increase every year and reach 65 percent and 35 percent, respectively, in 2025. However, as the preferred energy sources identified in the NEP is on-grid, the share of off-grid sources is projected to decline from 35 % in 2025 to 3 % in 2030.

Given the slower progress in the expansion of hydropower and penetration of off-grid sources of energy, including solar energy, during the last three years owing to a variety of reasons, it would be highly unlikely to meet the universal access target and the off-grid target of 35% by 2025 (see table 2).

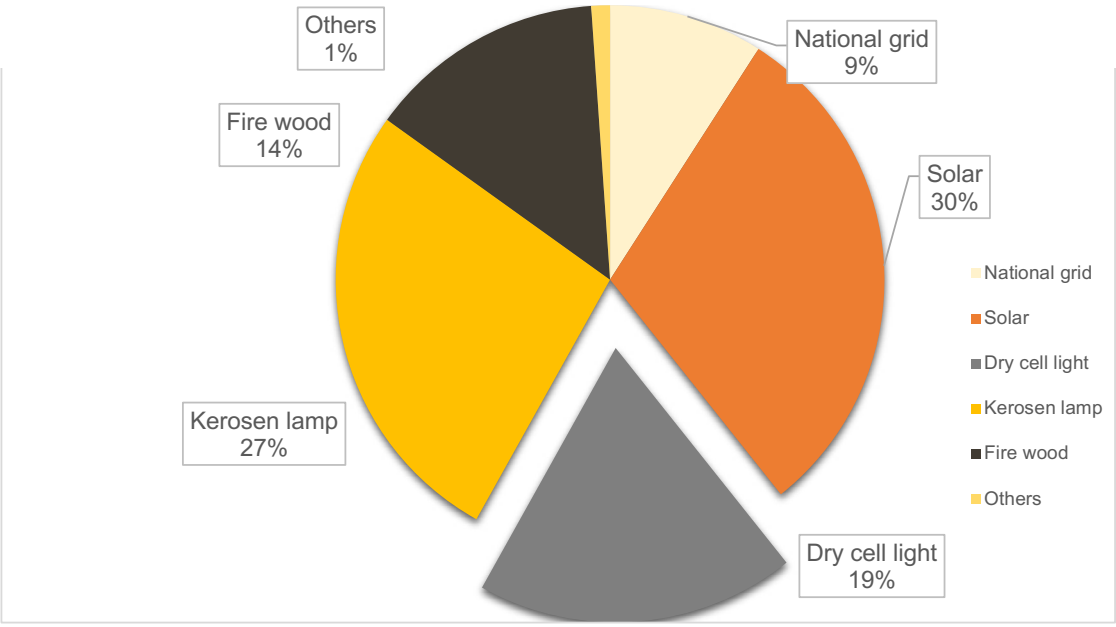
Table 2: Electricity Access Expansion Targets under the NEP (Source: NEP)

	Electricity Access Expansion Targets under the NEP				
	Households (millions)	On-Grid Access Rate (%)	Off-Grid Access Rate (%)	Total Access Rate (%)	
2016	18.0	20.0	11.0	31.0	
2017	18.5	21.0	11.0	33.0	
2018	19.0	23.0	11.0	34.0	
2019	19.5	26.0	11.0	37.0	
2020	20.0	29.0	13.0	42.0	
2021	20.4	33.0	16.0	49.0	
2022	20.8	40.0	20.0	60.0	
2023	21.2	49.0	24.0	73.0	
2024	21.6	57.0	29.0	86.0	
2025	22.0	65.0	35.0	100.0	
2026	22.6	72.0	28.0	100.0	
2027	23.2	79.0	21.0	100.0	
2028	23.8	85.0	15.0	100.0	
2029	24.4	91.0	9.0	100.0	
2030	25.0	97.0	3.0	100.0	

source: nep

In rural Ethiopia, solar energy, kerosene lamps, dry cell batteries, and fuel wood altogether account for 90% of lighting sources. Solar energy constitutes over a third of the total non-grid lighting sources, thereby indicating the challenges of freeing two-thirds of the rural population from using a harmful source of energy sources, such as firewood and kerosene lamps (see figure 2).

Figure 2: Main source of light in rural areas, in percent (Source: GOGLA)



The Recent Trend in SAS Sales

The importation, distribution, and use of SAS products in Ethiopia had been increasing but started declining since 2018. The SAS products distribution is concentrated in the four major regions of the country - Amhara, Oromia, SNNP and Tigray, partly due to the DBE's revolving credit facility, which was mainly extended to MFIs in these regions in order to finance households to purchase SAS products. These four regions also have a relatively developed distribution system at the grassroots level and more trained maintenance and technical staff compared to other regions.

The credit lines at the DBE, serving as a financial intermediary for funding provided by the World Bank, helped to import and distribute solar home systems and Lighting Globally certified solar lanterns in the country. Approved MFIs provided affordable financing to rural communities entering tripartite agreements with the Regional Energy Bureaus (RBE) and selected private sector enterprises (PSE) to procure and install off-grid products for the customer.

Trends in the number of SAS sales show a decline by 80% from 370k in 2017 to 76k in 2018. It somewhat recovered in 2019 but continued its declining trend in 2020 and 2021. Sales figures show no improvement currently, thereby questioning if the universal access target can be achieved by 2025 (see table 3).

Table 3: Trends in the volume of SAS sold in Ethiopia, Sales in '000 (Source: GOGLA, Semi-Annual Reports (2017-2021)

	2017	2018	2019	2020	2021
Volume of SAS products, in numuber	369.9	76	1012	606	440
Volume of SAS, growth in %		-79.5	1231.6	-40.1	-27.4

Source: Based on GODGLA, semi annual reports, 2017-2021

The GoE's facility at the Development Bank of Ethiopia (DBE), funded by the World Bank that provided local companies access to USD has been fully depleted as of 2021. As a result of this and the lack of priority access to FOREX by importers of SAS products, importing products has become much more difficult and costly. The relatively better SAS products sales to rural households during the period 2016-2019 have been due to the provision of credit facilities administered by the DBE under the International Development Association (IDA)-financed projects, Electricity Network Reinforcement and Expansion Project (ENREP), which were successfully channelling finances to support PSEs and Micro-Finance Institutions (MFI) for the deployment of off-grid renewable energy systems and energy-efficient products.

Despite supply shock, there is a high willingness to pay for SAS products by rural households since they do not have a healthy alternative source of light. A study in rural Ethiopia shows that about 80% of households are willing to pay for larger solar products with a capacity sufficient to power low-load appliances—such as multiple lights, a television, or a fan through a payment plan. It is also common that once off-grid communities' access energy through solar products, there is demand for solar products with an increased number of bulbs or upgraded to a TV or refrigeration system, and the need to buy submersible pumps or mills to increase productivity.

SAS Sector Financing Need

In order to achieve the NEP 2.0 target of 9 million off-grid connections, a steep increase in the supply of solar products, such as solar lanterns, Pico systems, and solar home systems, is required. According to estimates by AfDB, for the NEP 2.0 plan to be met, annual supplies of off-grid solar products have to rise on average by 12% per annum from 1.7 million units in 2021 to 2.7 million units in 2025.

Based on NEP 2.0 targets, MoWE estimated a US 1.7-billion-dollar financing need to support SAS service delivery to 9 million households by 2025[6]. The financing estimates considered three funding needs including FOREX, working capital, and capital and operating expenditures. A revolving FOREX facility is crucial to lowering the capital required to finance the SAS sector. In a revolving fund approach, FOREX repayments are used to refinance working capital as well as capital and operating expenditures. In the absence of a revolving fund, the capital requirements estimated by MoWE estimate increase to US 3.7 billion dollars[7]. **Since given the current state of only 11 percent of off-grid coverage, worsening FOREX reserve of the country, and lack of priority access for FOREX for importers of SAS products, achieving 35 percent access to electricity by off-grid sources by 2025 is highly unlikely.**

Utilizing the estimates from MoWE, the **estimated annual financing requirements for SAS products is US 212.5 million dollars and US 462.5 million dollars** over the period (2023-2030) for supporting SAS service expansion **with and without employing a revolving fund**, respectively.

6 MoWE (2020), NEP 2.0

7 MoWE (2020), NEP 2.0

7. STUDY FINDINGS

There is a g**ap between priorities in Ethiopia's Ten-year Perspective Development Plan and governments financial and FOREX priorities.** The Development Plan states that the off-grid solar subsector is one of the alternative sources of energy given priority for Ethiopia to develop. However, this Plan is not supported by favoured access to domestic or foreign loans, or access to FOREX for the importation of SAS products and inputs for manufacturers and assemblers of SAS solutions. This has seriously affected the performance of the sector as it is entirely dependent on access to forex and import.

Studies confirm various benefits of SAS use, including reducing firewood, hence preventing deforestation and desertification; reduction of time spent in collecting firewood by women and girls; minimizing health problems that will arise from inhaling smoke from the use of firewood; result in better education outcome in rural areas as it increases children's study time, reduce the consumption of kerosene, which is imported and hence help save the scarce, hard currency. Despite this, the **National Bank of Ethiopia's (NBE) current FOREX allocation policy does not clearly show SAS product importation as the priority for FOREX access or for foreign currency-denominated loans and suppliers' credit.** According to NBE directives, access to foreign loans and suppliers' credit is the exclusive right of exporting firms and Foreign Direct Investment (FDI) companies.

The upward trends in the performance of SAS importation and distribution in the country was seen during the period when the credit facility at DBE was providing FOREX and domestic credit for importers and distributors as well as consumer financing loans for end-users through MFIs. Once the Ethiopian Government's FOREX credit facility at the Development Bank of Ethiopia (DBE) was depleted **SAS products were not designated as a priority for FOREX by the NBE and importing SAS has become challenging.** The World Bank credit facility, managed by the DBE was providing FOREX and domestic credit for importers and distributors as well as consumer financing loans for end-users through MFIs.

In relation to solar energy, the Ministry of Finance plans and implements large energy projects of any kind under a private-public partnership (PPP) arrangement. The Ministry checks the feasibility of solar projects under PPP and presents them to the National Bank of Ethiopia (NBE) board for financing and FOREX access. Currently, **large solar projects defined as PPP are getting priority access to FOREX by the MoF**, and solutions from smaller solar energy private sector companies are not considered for FOREX priority by the MoF.

According to NBE, FOREX priority setting follows a national plan, which is prepared by the Ministry of Planning and Development (MoPD). Sectoral ministries prepare their respective development plan and set priorities and targets to be achieved for a particular plan period. Considering the macroeconomic environment, MoPD rationalizes, reprioritize, and consolidates the national plan. Based on this NBE, the NBE board prioritizes FOREX allocation. The NBE board prioritizes and reprioritizes FOREX allocation among different sectors/products as the situation demands and based on the FOREX availability. In the case of SAS products, the **MoWE, the sectoral ministry accountable, did not prioritize SAS for FOREX in its plan to that was submitted to the MoPD**. The SAS sector is also constrained due to limited credit access. A lack of priority access to FOREX for the SAS sector is simultaneously affecting the provision of domestic credit. Banks can finance what can be procured by local currency i.e., non-import components, but companies have limited access to FOREX for foreign components required.

The impact of **lack of sufficient FOREX access for SAS products have led to increased product prices** due to the small amount of inventory that companies can afford to import at any given time. Distributors sell products at a higher price so as to cover companies' operating costs.

GoE regulations prohibit foreign companies from participating in the distribution, wholesaling, and retailing business in Ethiopia. All respondents consulted believe that this will have adverse effects on small local business as foreign companies would replace retailors in the business and put pressure on FOREX since they would repatriate profit back to their home country.

There are many global and regional funds supporting the development of renewable energy sources in Ethiopia. The problem **hindering effectiveness of such grants is that the grants flow from donors to local SAS firms and are subject to a 70 percent surrender requirement** by the National Bank of Ethiopia. As the potential beneficiaries of such grants cannot use the fund that they mobilize for importing SAS, they are discouraged from searching for such support.

OTHER INSIGHTS

Opening up the financial sector, especially banks, for foreign competition could have both positive or adverse effects on the banking industry and the economy. The positive effects include enhanced competition, increased efficiency in the industry and hence in the economy, better resource allocation, technology transfer, and better availability of FOREX and credit. The potential adverse impacts include collapses of local small uncompetitive banks and the economies inability to generate FOREX used for the repatriation of profit and dividends by foreign banks.

Investment and promotion of renewable energy have the advantage of accessing carbon credit in the international market. Given the high demand, Ethiopia has an abundant opportunity in the international carbon credit market, however, the country does not have the legal framework for accessing carbon credit.

Due to NBE policy which permits using a share of export proceeds to finance imports, the number of companies "exporting" has increased in the last two years. Currently, leading importing companies are also engaged in exporting activities not to make a profit from the exports but to gain access to FOREX to finance their imports. With such a loophole in the policy, unless SAS companies join the export sector, they may not get FOREX to import.

RECOMMENDATIONS

The topic of access to FOREX in Ethiopia is quite complex to say the least. The study attempted to take into consideration all the different perspectives across government agencies involved. However, the recommendations that follow are based on improving the access to FOREX for the stand-alone solar sector specifically.

- Revise the current NBE FOREX allocation directive by **reducing the surrender requirement from 70 percent to 50 percent** for local exporters and remittances recipients. These companies will have 20% more foreign currency to import and distribute SAS products. This will also improve the companies' ability to effectively utilize grants provided by donor organizations and encouraged to mobilize further support from donors willing to support the SAS sector.
- Since the alternative energy sector is considered as priority in the national and sectoral development plans, **aligning priorities in FOREX allocation and foreign and local credit allocations is suggested to achieve universal energy targets.** The Ministry of Finance (MoF), Ministry of Water and Energy (MoWE) and the National Bank of Ethiopia (NBE) - key stakeholders effecting the policy in the SAS sector should collaborate and align priorities for financing and FOREX access for the SAS sector.
- To contain SAS product price increases due to small amounts of inventory being imported, **NBE has to allow some degree of access to suppliers' credit and foreign loans for SAS products** by taking into account the capacity of the company to repay the loan on a case-by-case basis.
- Since local **SAS manufacturing and assembly is currently limited, FOREX priority should be given to SAS importers.**

ANNEXES

Annex 1 Organizations Consulted

List of interviewed institutions and persons for one-on-one interviews.

NO	Name of respondent	Organization of respondent	Email address
1	Mr. Tilahun Tadesse	MoF, PPP, GD	ttadesse@mofed.gov.et
2	Mr. Yohannes	MoF, Director, Public Debt management	Contacted by phone
3	Mr. Bereket Fesehatsion	MoPD, Development Project Director	berekettsion98@gmail.com
4	Mr. Fikadu Degefe	NBE, V/Governor and Chief economics	Contacted by Phone
5	Mr. Thomas Koepke	Fosera Manufacturing plc.	thomas.koepke@fosera.com
6	Ms. Tewabech Workie	ESEDA	generalm.eseda@gmail.com
7	Mr. Addis	Maty electric and solar trade	Contacted by phone
8	Mr. Netsanet W/Kidan	Awash Bank	netsanetw@awashbank.gov.et
9	Mr. Kaleb Tadesse	MoWE	kalebtebeku@gmail.com
10	Mr. Gizaw Keneni	DBE,Extranal fund credit management Directorate	giz2005@gmail.com
11	Mr. Tefera Lechisa	Sinke Bank	tefelech@gmail.com
12	Mr. Tewodros Alemayehu	EEU (Ethiopia Electric Utility)	tedyenva@gmail.com
13	Mr. Gizachew Fekadu	Gorgeous Solar solution	gezachew.fekadu@gorgeous.com
14	Mrs. Mary Githinji	AECF	mgithinji@aecfafrica.com
15	Name not mentioned	Solar Village Ethiopia	solarvillageeth@gmail.com

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