



Centre for Sustainable Energy Services

TaTEDO STRATEGIC PLAN

(January 2013-December 2018)

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EXECUTIVE SUMMARY

TaTEDO is a sustainable energy organization based in Dar es Salaam, Tanzania with activities in several regions, districts and villages in Tanzania. The organization has more than twenty years' experience in sustainable energy development projects and programmes development in rural areas.

TaTEDO predicts a brighter future in years ahead with implementation of its proposed strategy and other development initiatives. This will be possible as the strategy will be implemented and enable TaTEDO and its social enterprise initiatives to withstand storm conditions of the past few years and remain intact, amid challenging environment of inadequate financial revenues and increased competitions.

The organization is now pursuing several measures to mobilize resources in order to meet its commitments of delivering energy services for its target groups and beneficiaries. The efforts are going concurrently with restructuring of the organization and its social enterprises to optimize and mobilize resources and thus ensuring financial sustainability and high impact of its efforts and services.

The revised Strategic Plan (January 2013–December 2018) builds on the considerable achievements of the previous efforts, recognizing the new TaTEDO Constitution and the social enterprise approach. TaTEDO aims at ensuring its financial sustainability while focusing on enhancing energy access to the majority in Tanzania

In the process to prepare and implement effective strategic plan, analysis for institutional, technical and financial issues were undertaken through brainstorming, discussing and came out with suggestions which were also shared with other stakeholders for further inputs.

The process of developing the strategic map was a dimension and exercise for developing strategic objectives. An important step in this was the formulation of a series of strategic responses for each driving force prioritized. This enabled the articulation of indicators of impact on the significant challenges identified in the environment.

The strategic map is a planned response to prioritized driving forces. The map would guide the activity planning for five years and includes six prioritized driving forces (formulated as opportunities and threats), functional areas of TaTEDO, strategic response (summed up as strategic objectives for each functional area) and indicators of impact for each driving force.

TaTEDO's main source of Revenue has been development partners' support. Financial self-sufficiency and sustainability are some of core objectives in this strategic plan. This is especially critical given the need to increase access to sustainable energy services and technology to the poor majority while ensuring support to the operations of TaTEDO. During the plan and implementation period, it will be necessary to identify alternative sources of revenue to enable the organization to reach a large section of the population. The desire is to grow internally by generating revenue and alternative resources to achieve a ratio that is favourable for its sustainable growth.

A detailed monitoring and evaluation system will be improved in order to assess and track the performance of proposed strategic plan (January 2013–December 2018). The monitoring and evaluation formats will be developed with active participation of TaTEDO partners in consultation to other relevant stakeholders and its use agreed upon by all members.

ABBREVIATIONS

Abbreviation	Meaning	Abbreviation	Meaning
AREED	<i>African Rural Enterprise Development</i>	NSGRP	<i>National Strategy for Growth and Reduction of Poverty</i>
CBO's	<i>Community Based Organizations</i>	NORAD	<i>Norwegian Agency for International Development</i>
CDM	<i>Clean Development Mechanism</i>	PRIDE	<i>Promotion of Rural Initiative and Development Enterprise</i>
CSO	<i>Civil Society Organization</i>	PV	<i>Photovoltaic</i>
DISEDEC	<i>District Sustainable Energy Development Cluster</i>	RESCO's	<i>Rural Energy Service Companies</i>
EAETDN	<i>East Africa Energy Technology Development Network</i>	RMS	<i>Resource Mobilization Strategy</i>
EDS	<i>Enterprise Development Service</i>	SEDC	<i>Sustainable Energy Development Centre</i>
EU	<i>European Union</i>	SEECO	<i>Sustainable Energy and Enterprise Company</i>
FI	<i>Financial Institutions</i>	SESCOM	<i>Sustainable Electricity Services Company</i>
FINNIDA	<i>Finish International Development Agency</i>	SETS	<i>Sustainable Energy Technology and Service</i>
GEF	<i>Global Environment Facility</i>	Sida	<i>Swedish International Development Agency</i>
GVEP	<i>Global Village Energy Partnership</i>	SME	<i>Small and Medium Enterprise</i>
GIZ	<i>German Technical Agency</i>	SMET's	<i>Sustainable Modern Energy Technologies</i>
HIVOS	<i>Humanist Institute for Cooperation with Developing Countries</i>	SWOT	<i>Strengths, Weakness, Opportunities, Threats</i>
IEEC	<i>Integrated Energy Enterprise Centre</i>	TaTEDO	<i>Tanzania Traditional Energy Development Organization</i>
MDGs	<i>Millennium Development Goals</i>	ToT	<i>Training of Trainer</i>
MEM	<i>Ministry of Energy and Mineral Resources</i>	UNDP	<i>United Nations Development Programme</i>
M&E	<i>Monitoring and Evaluation</i>	UNEP	<i>United Nations Environment Programme</i>
MFI's	<i>Micro Financing Institutions</i>	UNIDO	<i>United Nations Industrial Development Organization</i>
MFP	<i>Multifunction Platform</i>	USAID	<i>United States Agency for International Development</i>
NGO	<i>Non-Governmental Organizations</i>	VICOBA	<i>Village Community Bank</i>
NGSEN	<i>National Gender and Sustainable Energy Network</i>	WB	<i>World Bank</i>

CHAPTER 1: BACKGROUND

1.1 The Energy Situation in Tanzania

Tanzania is endowed with diverse energy resources including biomass, natural gas, hydro, coal, geothermal, solar and wind, uranium, much of which is untapped. Biomass accounts for up to 90% of total national energy consumption, with about 2% from electricity (grid, solar, small hydro, cogeneration, etc.) and 8% from petroleum products.

Biomass fuels (firewood, charcoal, animal waste and farm residues) are the dominant energy sources in Tanzania, accounting for about 90 percent of the total energy used in rural areas. Per capita commercial energy (electricity and petroleum) consumption is low compared to the per capita biomass energy consumption.

While electricity is an important modern energy carrier for creating better energy services and support of socio-economic activities, only small percent, about 18% of the population has access to electricity. leaving a large population of Tanzanians, more than 36 million, without electricity only depending on wood fuel as their main source of energy. It is expected that electricity demand will triple by 2020.

The rural areas of Tanzania pose specific challenges, mainly because of their low population density and remoteness, both of which result in high costs of production, transmission and distribution of electricity. Majority of the people, especially those in rural areas have lower purchasing power and thus cannot afford some modern energy services. The low access to modern energy services has serious impact on the overall performance of the country's social and economic indicators and has obviously suppressed economic growth which is manifested in low level of agricultural mechanization and industrialization.

Energy is also needed for the development of small-scale enterprises and other productive activities. Improved access to modern energy services, therefore, is crucial for the overall socio-economic development of the country although certain key challenges (being small capitals, capacity and availability of appropriate technologies) need to be overcome.

The following investment opportunities exist in the energy sector: -

- Rural Electrification;
- Exploration of petroleum;
- Generation, transmission and distribution of electricity;
- Development of new and renewable energy resources; and
- Promotion of energy efficiency and conservation initiatives

1.2 Challenges of the Energy Sector

In order to achieve the overall objectives of economic growth and poverty reduction, there is a need for substantial improvements within the energy sector, both on the demand and supply side. The main challenges of the energy sector are:

- On-going exploration activities with lot of uncertainties.
- Increased energy and fuels demand thus requiring massive investments in generation, transmission and distribution;
- Unstable and escalating petroleum prices;
- Over dependency on woodfuel and inefficient traditional technologies for cooking
- Cross border and regional interconnection for fostering power reliability;
- Low accessibility of rural population to modern energy services.
- Making renewable energy technologies compete with fossil fuel based ones.
- Energy pricing versus affordability.
- Energy Conservation and efficiency and quality standardization of equipment and gadgets.

The Vision of the energy sector is to effectively contribute to the growth of the national economy and thereby improve the standard of living for the entire nation in a sustainable and environmentally sound manner. Its mission is to create conditions for provision of safe, reliable, efficient, cost-effective and environmentally appropriate energy services to all sectors on a sustainable basis. The energy policy takes into account the need for improving access for the greater proportion of the population to more efficient, environmental friendly modern energy services. This is envisaged to be achieved through substantial share of renewable energies. The Energy Policy of 2003 also recognizes the importance of private sector participation in the development of the energy sector. In order to achieve this, the sector is undergoing restructuring in order to attract more private investment, enhance efficiency in the provision of energy services, expand access to electricity and promotes regional trading through interconnections.

For almost a decade, the role of the government has changed to that of a facilitator responsible for providing an enabling policy, institutional and legal framework and creating incentives to motivate other actors such as the private sector, NGOs and CBOs to take up the task of providing sustainable energy services. This has provided opportunity for TaTEDO and other stakeholders to contribute significantly in addressing the energy challenges of the country.

1.3 Sustainable Energy Technologies and Services (SETS)

Renewable energy resources are expected to play a significant role in the supply of modern energy services in the country. This is largely due to their availability, suitability in addressing global concerns on environment and the need to make energy services available to rural and peri-urban areas where most of these resources exist. At present, the following renewable energy technologies are being developed, promoted and disseminated. Small scale hydropower, modern biomass technology [co-generation, improved stoves, improved charcoal production, thermal-chemical gasification, briquettes, liquid biofuel production, etc.]; solar energy; wind for mechanical and electrical power; development of liquid biofuels to supplement use of petroleum fuels.

In addition, considering the fact that a unit energy saved is much cheaper and more environmental manner than generating the same unit, energy efficiency and conservation is also being promoted by the Ministry of Energy and Minerals in collaboration with other stakeholders.

CHAPTER 2: THE GENESIS AND GROWTH OF TaTEDO

TaTEDO is based in Dar es salaam, Tanzania with activities in several regions, districts and villages in Tanzania. The organization has more than twenty years' experience in sustainable energy development projects and programmes in rural areas.

TaTEDO commenced in 29th of May 1990 to address challenges and lessons learned from the different hierarchies of the community on renewable energy services. Some of the challenges include sustainability of different community energy interventions, especially local ownership and perpetuation of started efforts of developing improved energy technologies and lack of entrepreneurs to support and invest in private, domestic and industrial stove production.

The main driving force for TaTEDO's establishment was to alleviate the energy access challenges. Different studies indicate that there is high rate of using woodfuels emanated into rapid deforestation and desertification, loss of land fertility, land degradation which decreases agricultural productivity. This was based on the premise that the most significant challenge facing the energy sector today is energy access while the country has abundant of energy resources. The energy use pattern is characterized by low per capita consumption of commercial energy sources. More than 90 percent of the total energy is consumed in rural areas, mostly from biomass and human. Biomass, particularly wood-fuels and human, constitutes about 90 per-cent of the total energy consumption. The rest, 10 per cent of the energy consumed in the country, is met from other sources such as fossil fuels, grid and non-grid electricity.

2.1 Development of Sustainable Energy Technologies and Services

TaTEDO started to develop Sustainable Energy Technologies (SETs) by promoting improved woodfuel stove designs adopted in Tanzania from other countries. In order to promote these technologies, TaTEDO conducted training for artisans and technicians on how to produce improved charcoal stoves and for women on how to bake using TaTEDO improved charcoal ovens. Training activities coupled with awareness creation campaigns created and increased demand for improved charcoal stoves and ovens in Dar es Salaam. TaTEDO established workshops at Vingunguti ,enterprises surrounding its main office in Kijitonyama and its field station (SEDC) at Mbezi Juu, Dar es Salaam for producing ceramic parts of the stoves to strengthen the capacity building for other technicians and supply of stoves.

Positive response coupled with encouraging high acceptability of the developed improved charcoal stoves and ovens from users encouraged TaTEDO to expand training and awareness activities to Kilimanjaro, Coast, Shinyanga and Mwanza regions. In parallel with training activities, TaTEDO in collaboration with other stakeholders managed to carry out various adaptive research activities to further improve woodfuel saving stoves. Through adaptive research activities, improved charcoal stoves and ovens were modified and adopted to suit the requirements of communities in the respective regions. TaTEDO has now managed to develop a total of 12 prototypes of stoves and 6 types of ovens. The thermal efficiency of these stoves and ovens compared to the traditional ones has been raised from 10 percent of the traditional charcoal stoves to between 30 and 40 percent. This implies that improved stoves can save consumption of charcoal by 40 to 50 percent compared to traditional charcoal stoves.

In the year 1998 with support from UNDP/GEF, TaTEDO conducted a study on factors, which were hindering wide scale adoption of improved stoves in Dar es Salaam. The study revealed that the demand of improved charcoal stoves had increased from 4,000 improved stoves per month in 1994 to 7,000 improved stoves per month in 1998, but the trained artisans in Dar es Salaam were able to meet only half of the estimated demand. More than 40 percent of the estimated demand originated from other regions, which were not covered by TaTEDO activities. The current supply of improved stoves in Dar es Salaam is estimated to be at 15,000 improved stoves per month and is still growing. The

existence of high demand and low capital base created enabling environment for increased production of low quality stoves in the market.

2.2 Diversification of Sustainable Energy Technologies

TaTEDO in 1999, diversified sustainable energy technologies, the situation which was driven by the demand from communities. Sustainable energy technologies such as solar PV systems, solar drying, improved charcoal production methods (IBEK), etc. were added into TaTEDO technology portfolio. Later on Sustainable Modern Energy Technologies such as wind turbine system for electricity generation was piloted at SEDC centre. There were several types of technologies designed and developed such as fireless cookers, rocket stoves, safari stove (Erik), mud stoves and improved firewood baking oven. Additional technologies such as improved okoa firewood stoves (I-III) were other improved firewood stoves have been designed for rural areas. TaTEDO through GAP funds also MFP Plotting Project (GAP Funds) and Energy Crops (Jatropha). Other initiatives include the establishment of the Sustainable Energy Enterprises Centre (SEEC), Micro Hydro System was introduced at Kinko Village, Lushoto, Tanga and adopted three types of biogas plants namely Vacvina, Fixed Dome and Floating Tank.

TaTEDO has recently promoted use of bio-waste for bio-char and briquettes production using a retort kiln, promoting MFP mini-grids in 15 villages, install solar PV systems and water heaters in institutions and SMEs, develop solar cell-phone multi-charging stations, develop solar and biogas hybrid system, promote power packs and lanterns for off-grid areas, etc. The main challenges which reduced performance of TaTEDO in 2010 to 2013 was the world economic crisis and its dependency on external resource support which lead into its recession in energy development efforts. The personnel were reduced from more than 50 to 25 staff.

2.3 Off-springs of TaTEDO

The development of several social enterprises and organizations has been influenced by TaTEDO training and development initiatives. Some of the off-spring organizations and companies include;

2.3.1 Social Enterprises

Social enterprises are registered as a single or a holding company to support access to sustainable energy services. The enterprises are important utility for creating sustainability of modern energy services. In the new strategic period, the social enterprises will be encouraged to undertake and operationalize their core activities as independent registered enterprises. The enterprises will have own Board of Directors and management. Linkages to TaTEDO will be through the Board of Directors. TaTEDO will support the enterprises through capacity building, marketing, branding, resource mobilization and development of key products during the first two years of operations. In addition, TaTEDO will assist energy social enterprises for partners to develop separate strategies and business plans in order to further develop sustainable energy services. It is envisaged that TaTEDO will develop strategic partnerships with each of the enterprise to ensure sustainable energy access to communities.

2.3.2 Sustainable Energy Networks and Organizations

There are four networks that TaTEDO was involved in their formation and continues to actively play an important role in their activities. These are:

- **Sustainable Energy and Development Centre (SEDC).**

The SEDC centre was initiated at Mbezi Juu, Dar es Salaam in 2003. SEDC is poised to become a centre in developing and managing sustainable energy knowledge in Tanzania and to serve as a think tank of ideas on clean and green energy. The ultimate focus of the centre is knowledge and technology transfer on the basis of adaptive Research, studies, consultancy, publications and tailor-made training courses.

- East African Energy Technology Development Network (EAETDN)**
 East African Energy Technology Development Network (EAETDN) is a professional body for developing energy technologies in the East Africa Region. The network is non-governmental, non-profit making, non-political and gender sensitive. The network was formed in Arusha in November 1998 by 25 founder member organizations from Kenya, Uganda and Tanzania. Geographically, the network operates in Kenya, Tanzania and Uganda. Each country is divided into specific areas, which are coordinated by focal points. The focal points are strategically located geographically, and have the strength, skills and resources to serve and support smaller network members. The organizations which act as focal points are SCODE (Kenya), EAETDN (Uganda), TaTEDO, MATI-Ukiliguru (Tanzania), CARMATEC (Tanzania) and Department of Energy (Zanzibar). The present members of EAETDN include NGOs, Community Groups private individuals, Government Departments and Quasi-government Institutions who works in the area of energy and energy technology development
- National Gender and Sustainable Energy network (NGSEN)**
 The National Gender and Sustainable Energy Network (NGSEN) was formed in 1998, through a national workshop organized by TaTEDO and ENERGIA of the Netherlands. The aim of the network is to promote women's involvement in the energy sector in Tanzania. The network emerged to fill the gaps and challenges entrenched in the gender and energy relationships for joint action. This relationship and its consequences on development are inadequately understood by many including policy and decision makers. NGSEN anticipates to bring the issues to light for appropriate action to guarantee sustainable energy for sustainable development of both men and women.
- Tanzania Renewable Energy Association (TAREA) (former TASEA)**
 TAREA is an association which was transformed from former Tanzania Solar Energy Association (TASEA). TASEA was a professional body which was established by TaTEDO and her partners in 2001 whose primary objective was to promote and advance the science and application of solar energy in Tanzania through both direct forms (thermal, photovoltaic, and photo-chemistry) and indirect forms (wind, biomass, small hydro, tidal, etc.). TASEA intended to develop and promote rational use of solar energy through its members by coordinating provision of relevant information, knowledge, skills, and resources geared towards community socio-economic development and environment sound practices. TAREA has more than 250 members. TAREA membership includes corporate (service providers/enterprises), professional (individuals), associate (institutions and individuals), student members and international members.
- Sustainable Energy Groups**
 TaTEDO conducted a study in Dar es Salaam in April of 2009 at Temeke, Kinondoni and Ilala Districts, which showed that, the field of improved cook-stoves has been growing fast in recent years. This has been proven by small industries, groups and individuals involved in making improved cooking stoves and sell them to earn some income. More than 400 sustainable energy groups have been supported by TaTEDO in ten regions of Tanzania. The one of these groups is Sahara A Stove Production Group, established in 1996. The monthly production of this group has increased from 3,000 stoves in 1997 up to the present production of 20,000 stoves and 30,000 ceramic liners per month. The demand of these stoves is still high since the production of cook-stoves has not outweighed demand in the market.

These companies, networks and sustainable energy groups contribute significantly in promoting the vision of the TaTEDO while meeting the rural energy needs of the country.

CHAPTER 3: IMPLEMENTATION APPROACH

Based on several years of field experience, TaTEDO has managed to formulate her field approach for implementing sustainable modern energy activities in urban and rural communities. The approach is divided into three major steps namely creation of local partnership with local organizations and authorities, community mobilization and technical capacity building business and entrepreneurship development. The summary of these steps is shown hereunder:

3.1 Partnership with Local Organizations and Authorities

Local partnership involves identifying local organizations or district sustainable energy development clusters, which are willing to work jointly with TaTEDO to implement and support sustainable modern energy development activities at local level. TaTEDO has so far managed to facilitate the formation of District Sustainable Energy Development Clusters (DISEDs) in fourteen districts and works jointly with partner organizations in thirteen districts. TaTEDO's partnership has also trickled down to the villages whereby village energy teams, and Sustainable Energy Groups (SEGs) have been formed in order to successfully undertake sustainable modern energy activities at village level. Through this step, community participation, good governance is supported to encourage involvement of all stakeholders at local levels.

3.2 Field Implementation Approach

TaTEDO applies a systematic field approach in the implementation of sustainable modern energy

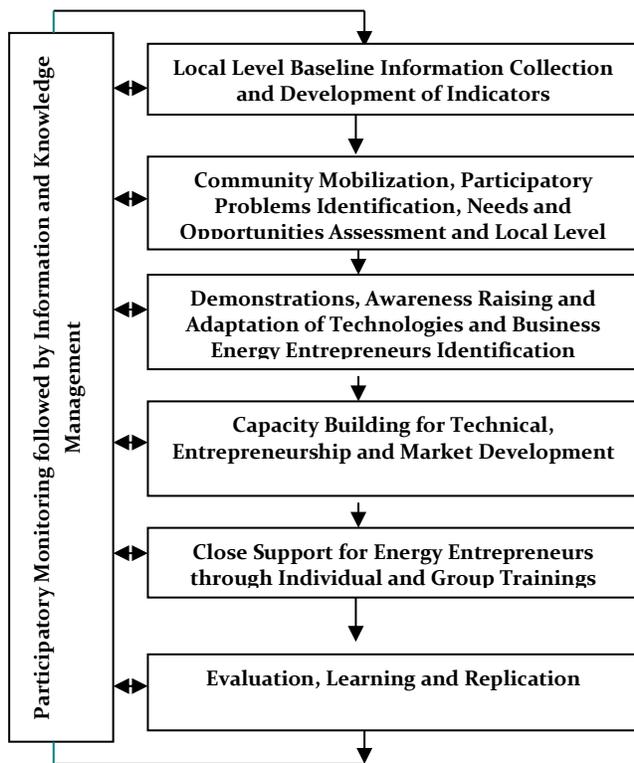


Fig 4: Field Implementation Approach Steps

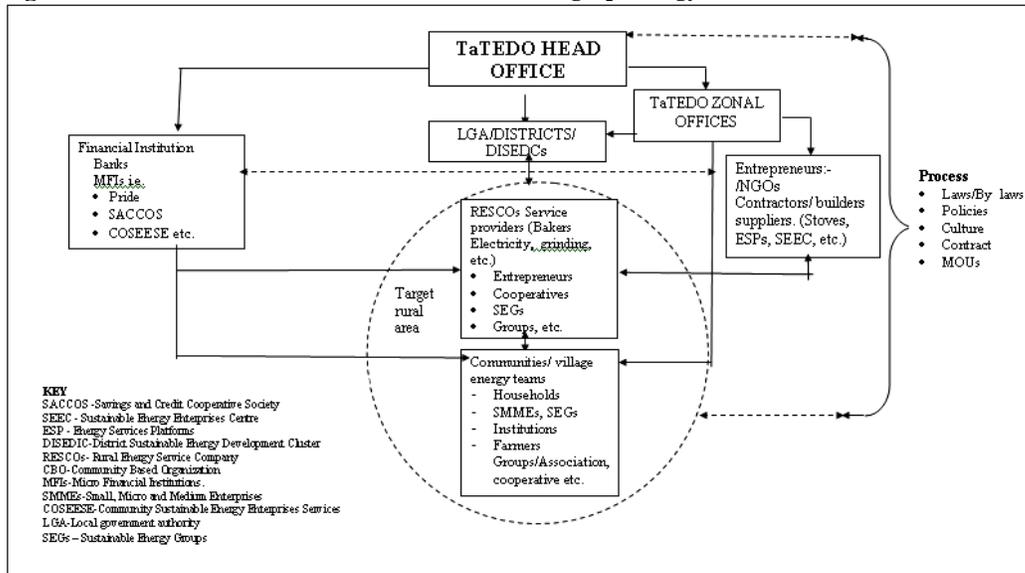
Successful development, support and strengthening of actors shown in this structure imply enhancing

development activities. The approach is structured in a number of implementation phases; this has proved successful in the implementation of sustainable modern energy initiatives and community interventions.

The approach includes participatory planning, implementation and monitoring of the interventions at local level. Participatory development of enterprise and business development services during technical capacity building is very important step to ensure marketing of technologies and services as important elements of the sustainability of energy activities. This method involves helping the entrepreneurs to screen and validate business ideas, undertake opportunity and market analysis using appropriate marketing tools and strategies to implement successful business enterprises. The structure aims at facilitating the scaling up, replicating and mainstreaming energy initiatives at the local level.

capacity for accessing modern energy technologies and services at the local level. The field approach is supported by a strong and feasible local level institutional structure (fig 5) for facilitating access to sustainable modern energy services.

Figure 5: Local Level Institutional Structure for Scaling Up Energy Access in Rural Areas



At the village level, the programme is based on the principle of local responsibility for management/operation, after adequate capacity building efforts with support from TaTEDO and DiSEDCs. The village sustainable energy service providers are supported to ensure both technical and business viability are created and sustained at the village level.

3.3 Marketing and Entrepreneurship Development

The approach involves developing capacity of energy social entrepreneurs to undertake and operate sustainable energy enterprises profitably through market promotion, business development, as well as advocating for favourable business environment. After the stage of demonstrating sustainable modern energy technologies, TaTEDO identifies entrepreneurs who are willing to promote modern energy technologies in both rural and urban areas. After identification and selection of energy entrepreneurs, assessment is conducted to determine market and barriers, prepare business plan and determine type and level of BDS support services to be offered to the group of entrepreneurs under consideration. Technology specific entrepreneur support package is prepared and carefully implemented according to the area and entrepreneur specific requirements. TaTEDO supports packages in the following categories:

- **Enterprise Start-ups Package:** This is a package for entrepreneurs who are willing to start their own businesses and who have never carried out business before. The lack of business skills for running energy enterprises is often observed as the most serious barrier to development of small energy business sector.
- **Existing Enterprise Package:** This is a package for existing entrepreneurs who are already in the energy enterprises but lack business management skills to run businesses more efficiently, profitably and sustainably. The focus is on those entrepreneurs who want to switch to sustainable modern energy technology production, installation or use for businesses. The support services include coaching of the entrepreneurs.

CHAPTER 4: STRATEGIC PLAN DEVELOPMENT

4.1 Why the Strategic Planning for a Better Future

TaTEDO and its social enterprises efforts predict a brighter future in years ahead with implementation of its proposed strategy and other development initiatives. Implementation of the strategy will enable TaTEDO and its social enterprise to withstand conditions of the storm of the past few years and remain intact, amid challenging environment of inadequate financial revenues and increased competitions.

TaTEDO before 2010 had been highly successfully, implementing several successful projects in more than 100 villages. Unfortunately the growth in assets and personnel did not translate into sustained revenue earnings. This led into recurrent expenses far exceeding unreliable income earnings. The organization management to some extent saw these challenges and incoming storms and acted proactively to steer the organization clear of turbulences, some of such measures were to reduce personnel and increase resource mobilization efforts.

Several external and internal factors have played roles in the recent performance of TaTEDO. After which, the review by the board formed a task force for instituting measures to address key institutional and financial issues, possible reason for this performance were identified.

The organization is now pursuing several measures to mobilize resources in order to meet its commitments of delivering energy services for its target groups and beneficiaries. The efforts are going concurrently with restructuring of the organization and its enterprise to optimize and mobilize resources thus ensuring financial sustainability and high impact of its efforts and services. The resource mobilization enhancement opportunities will focus on maximum use of its capacity, professional and sound management of financial revenues and personnel.

Other measures are aimed at strengthening its social enterprise efforts. More important value enhancement will involve optimal deployment of some of its existing assets to increase cash flow, serve debts and improve operational efficiency by successful implementation of the above measures.

Coupled with adequate finance/ capital for its social enterprise and better strategic management will enable the organization on sustainability path and continue to make more funds for enhancing sustainable energy services.

4.2 Strategic Plan Focus

The Strategic Plan (January 2013–December 2018) builds on the considerable achievements of the previous plan, recognizing the new TaTEDO Constitution, the social entrepreneurship approach and lessons learned from recent challenges. TaTEDO aims at ensuring financial sustainability while focusing on ensuring energy access to the majority.

The new TaTEDO dream is to:

- Pursue energy access problems of the poor while also looking at the enterprise case
- Move from traditional thinking approaches to one which pursues energy access opportunities more vigorously
- Generate income for large scale energy access
- Go beyond the donors support and work towards self-reliance.

- Develop strategic partnerships with business entrepreneurs and community for energy access

This calls for diversified approaches for delivering its services, financing and mobilizing resources from different sources in order to accelerate energy access and sustain its services. TaTEDO shall gradually change from the traditional NGO to a social enterprise organization (SEO). By this change TaTEDO will maintain a development approach as well as an enterprise approach in order to achieve its goals.

Further it shall seek to categorize SETs as follows:

- i) SETs for basic needs for households and businesses
 - stoves for cooking
 - solar lanterns, SHS
- ii) SETs for productive needs for Households and businesses
 - ovens for baking
 - solar multi-chargers
 - solar driers
 - Solar water heaters
- iii) SETs structures for meeting medium scale energy needs for domestic and businesses.
 - Off-grid systems (small and medium scale 10kwh and above)
 - Biogas for community
 - Institutional solar water heaters i.e. hotels, social centres etc.

This categorization also defines the short, medium and long term horizons for TaTEDO. SET structures for meeting medium scale energy needs are considered as long term investment opportunities.

4.3 How Strategic Plan Was Developed?

Professional strategy consultants helped TaTEDO develop the plan. To gather background information as well as obtain participation and buy-in, they conducted in-depth interviews with managers and staff at all levels of the organization. The research and development process included:

Questionnaire to staff and managers: Through a structured questionnaire, the consultants asked individuals and groups in TaTEDO and partner organizations about their views on the following:

- Organization vision and mission
- Structure, mandate and function of business units, departments
- Strategic goals, objectives, outputs, strategies and activities
- SWOT analysis
- Stakeholders, partnerships and collaborations

Further a literature review was conducted on various documentation including the new constitution, energy sector reports, previous strategic plans and organization structures among other key documents.

The Strategic Planning workshops, a multi-day retreats facilitated by the consultants, managers developed vision, objectives, activities and budgets. Comments from staff were incorporated into the strategy.

CHAPTER 5: STRATEGIC ORGANIZATIONAL OVERVIEW

The chapter assessed the belief of the management of TaTEDO on development of sustainable energy services by identifying what the organization stands for, what it hopes to accomplish, its responsibilities and a segment of the country and population will be covered by the organization. The assessment went further and find out on how the success of the organization will be achieved through vision, mission, goals, values and objectives.

5.1 Vision

A country where all have access to sustainable energy services while conserving the environment, creating wealth, and combating climate change.

5.2 Mission

To facilitate and empower stakeholder in order to unlock barriers to increased access to sustainable energy services by enhancing energy technologies, business and policy capacities in partnership with communities, entrepreneurs, and other stakeholders for environmental conservation, wealth creation and climate change mitigation and adaptation.

5.3 Goals

- Improve quality of life of Tanzanians by contributing to increased access to sustainable energy services, employment and income generating opportunities, which are essential for poverty reduction,
- Reduce environmental degradation resulting from increased and unsustainable use of wood and fossil fuels,
- Assist the country to reduce dependence on imported energy.

5.4 Overall Objective

The overall objective of TaTEDO is to enable majority of the population, particularly women in rural areas to access sustainable modern energy technologies and services that contribute to poverty reduction, sustainable development and climate change mitigation and adaptation.

5.5 Core Values

To achieve its vision and mission, TaTEDO constantly and diligently subscribe to a culture built on the following principles and values:

- **Accountability**

TaTEDO is accountable to its members and stakeholders. Its resources are managed responsibly and used effectively to provide value for money. The organization is committed to being held responsible for all actions and tracks them with appropriate documentation.

- **Integrity**

TaTEDO value ethical behavior and operate with transparency and lack of ambiguity. The actions of TaTEDO are clear, consistent, honest and truthful. TaTEDO values the creation of new solutions to existing and new challenges. TaTEDO is dedicated to creation of new strategic approaches and place a premium on designing innovative solutions for enhancing sustainable energy services in the country.

- **Professional and Service Excellence**

TaTEDO value its stakeholders and strive to meet their expectations through delivering high quality and satisfactory services through creativity, innovations and adaptive research.

- **Social Responsibility**

TaTEDO endeavour to be socially responsible to its stakeholders and society at large and pursue its goals through socially acceptable participation and practices that preserve the environment, promote socio economic development, improve the health of the technology users; strengthening local capacities; enabling gender equity; equitable access to available services; closeness to beneficiaries in order to develop a self-reliance society.

- **Teamwork**

In order to meet its goals, TaTEDO practice teamwork to optimize the synergies of individuals and collective human resource talent and capacity.

- **Efficiency**

With a highly motivated and competitive staff, TaTEDO ensure the optimum utilization of all resources available to deliver quality and timely services to all stakeholders.

- **Good Governance**

By managing the organization activities in a participatory manner through planning, decision making, TaTEDO work as team to increase efficiency, effectiveness and enhanced transparency.

5.6 Geographical Focus

Depending on resource availability, TaTEDO's activities are implemented in several regions of Tanzania including among others: Arusha, Coast, Kilimanjaro, Manyara, Runway, Morogoro, Mwanza, Shinyanga, Tanga, and Dar es Salaam. The head office is located in Dar es Salaam. The organization collaborates with zonal business centres in Shinyanga in the Lake zone which serves Mwanza and Shinyanga programme areas. Another centre is in Moshi that serves Kilimanjaro, Manyara, and Arusha regions. Some activities are implemented in the urban and peri-urban areas although most of them are implemented in rural areas.

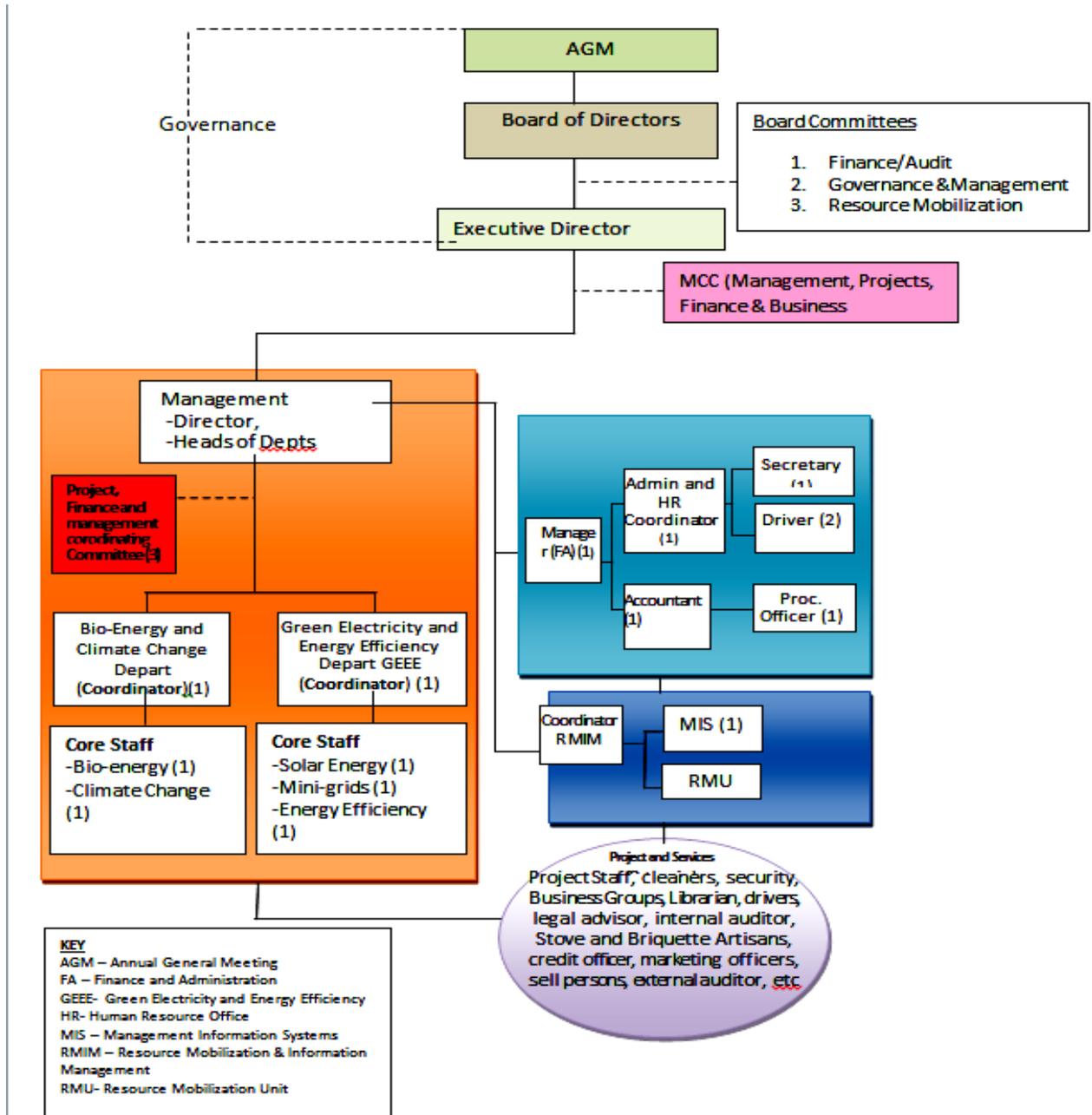
5.7 Organization Activities

- Promote the use of sustainable energy for basic commercial and productive uses (industrial, business, agriculture and basic infrastructure), consumptive uses (households and communities) and social institutional uses (education, health, water, communication, etc.).
- Implement sustainable energy programmes and projects at the local levels.
- Provide sustainable energy related consultancy services.
- Develop networking and partnership with local and international organizations,
- Manage and disseminate energy information to stakeholders for awareness creation.
- Conduct lobbying and advocacy to influence energy related policies, legislations and strategies
- Support sustainable energy enterprises.
- Conduct energy related applied researches.

CHAPTER 6: INSTITUTIONAL FRAMEWORK

6.1 Organizational Structure

TaTEDO will be structured into two sub-sections related to development an administrative activities The board of trustees and board of directors will be overseer of TaTEDO activities with support of month by month strategic and operational support services from the executive council. The institutional structure for TaTEDO to implement the strategy is as proposed hereunder:



TaTEDO as an organization for sustainable energy services will employ few core staff of not more than 25 personnel depending on the mobilized funds and continue to develop programs and projects. TaTEDO will remain with a few core, outsourced services and project staff. The Executive Director with executive council will also be responsible for coordinating the activities of organization and project linked staff and technical experts so as to ensure synergy between the core activities and that of specialized projects and programmes. The core staff will also provide assistance as needed by special projects, and programmes.

The organization will outsource experts/consultants to assist with specific assignments on a short-term basis. The recruitment of such specialized services will be done in accordance with laid rules and regulations. For most projects for which funding are secured, some staff will have to be hired to work on such projects as part of the overhead costs to the project. The organization will also outsource services for housekeeping, security, technical groups on short term basis (for solar, biomass, mini-grids, etc.).

Core staff will be the long term technical staff who will manage and implement strategic and operational decisions of the organization. These will be a small cadre of experienced staff providing expertise in the areas of bio-energy, climate change, bio-energy innovations, solar energy, mini-grids, energy efficiency resource mobilization, information management, procurement human resources, accounts, secretary, etc.

6.2 Zonal Energy Business Centres

The Zonal Energy Business Centres will be semi-autonomous; mainly undertaking enterprising and project activities initiated on their own or with TaTEDO head office and provide support to development activities from zones or head office wherever deemed necessary. The zonal centres should mobilize resources for enterprising from within the zones and be allowed to undertake projects and social enterprising according to environment and opportunities in their zones.

CHAPTER 7: SITUATIONAL ANALYSIS

The situation analysis was developed by using SWOT and stakeholder analysis. The **SWOT** analysis considered TaTEDO's Strengths and Weaknesses, Opportunities and Threats. Stakeholder analysis considered all people and facilities involved in the development of organization and sustainable energy services.

7.1 SWOT Analysis

SWOT analysis focused on listing and assessing strengths, weaknesses, opportunities and threats prevailing in and around TaTEDO environment. Whilst strengths and weaknesses refer to internal capacities comparative advantages and internal limitations of the TaTEDO, the opportunities and threats refer to the outside environment facing TaTEDO in terms of potential and competition. In doing the SWOT analysis of TaTEDO the following results were identified:

Strengths

- Long experience in energy sector
- Proven sustainable energy technologies
- Committed and competent workforce
- Good corporate governance
- Organization is well established with zonal offices and at grass root levels
- Has good and visionary leadership
- Consciously in gender mainstreaming at the organization and programme level
- Established business entities
- Local and international networks.
- Good working relationship with government and development partners
- Good partnership and networking with local and international partners
- Competency in energy research and technologies
- Own assets, infrastructure, land and energy Centre.

Weaknesses

- High demand of TaTEDO activities while resources are few
- Inadequate capacity to measure impact
- Low knowledge and capacity in business issues
- Inadequate monitoring and evaluation of impact
- Inadequate facilities for mass production
- Inadequate social entrepreneurship culture and skills.
- Insufficient investment capital
- Insufficient monitoring of the resources and implemented activities
- Low cost effectiveness.

Opportunities

- High demand of SETs in the country
- Supportive national policies
- Abundance of Renewable energy sources
- Support from international development partners
- Price fluctuation of petroleum products
- Good relationship with government institutions
- The interrelated environmental, energy climate change issues

- Availability of customers
- Carbon financing opportunities
- International and local gender commitment
- Huge market for sustainable energy technologies.-
- Room for PPP working approach
- Commercialization of some business units

Threats

- Low purchase power of services and products
- Low priority and inadequate commitment from government on renewable energy services
- Insufficient access to affordable financing for sustainable modern energy technologies and services
- Low awareness of the opportunities available in sustainable modern technologies and services
- Social barriers- change of behavior in using sustainable modern energy technologies
- Climatic conditions
- World economic crisis
- Change of area of focus by donor and policies
- Introduction of foreign products
- Poverty level to the target groups
- Financial constrains- donors trend
- Unstable currency-price fluctuations of our technologies
- Influx of cheap and poor quality products in the market

7.2 Stakeholder Analysis

Stakeholders play important complementary roles in supporting sustainable energy technologies and services by TaTEDO and were therefore carefully considered in developing the Strategic Plan. The stakeholders included:

- **Primary Stakeholders**

Local women, men and children are pivotal beneficiaries of TaTEDO's projects and programmes. They are the primary stakeholders as their needs are the focus of the projects and their views on impact are what count. The primary stakeholders include Target groups and beneficiaries in the communities. Target groups in this case are sets of people who serve as the focal groups for bringing changes in the community through implementation of sustainable modern energy activities. The target groups include stove masons, stove artisans, solar technicians, MFP technicians, biogas technicians, carpenters, electricians, energy entrepreneurs, etc. Beneficiaries are groups or people who are benefiting from sustainable modern energy technologies and services provided by TaTEDO and her partners. The major beneficiaries are households (men and women) in urban, peri-urban and rural areas and institutions such as schools, health centres, social centres, prisons, villages, etc. Other beneficiaries are small, micro and medium enterprises such as food vending enterprises, shops, tourist camps, guest houses, etc.

Some of target groups are technicians who are increasingly acting as full partners in project initiatives, rather than passive beneficiaries. TaTEDO's programmes aims to strengthen self-reliance development to this group. TaTEDO collaborates with the primary stakeholder group during project design, implementation and assessment of the findings.

- **Grassroots Organizations**

Grassroots organizations that share TaTEDO's vision and mission at community and higher levels are important partners. They provide invaluable insights on priorities and appropriate processes during the design phase and undertake some of the implementation of the projects. One of their most valuable roles is in facilitating participatory processes during programme implementation. TaTEDO works with grassroots organizations to create opportunities for local people to participate meaningfully during the implementation of the programmes and monitoring activities. Working with grassroots organizations increases communities' ownership of the projects and achievement and thus the likelihood of a sustained impact.

- **Local Partners**

Projects are implemented, not only through grassroots organizations but also through local government machinery, non-governmental organizations (NGOs) and commercial operators such as banks and other financial institutions. These groups often have a catalytic and advisory functions since decision-making lies with the primary stakeholders. Partners are guided by contracts on their responsibilities, standards of work and style of operation. All partners are responsible for monitoring the activities they implement.

- **Government Ministries**

The Government Ministries are the secondary stakeholders in the implementation of TaTEDO's programmes and activities. The Government Ministries have mutual interest and purpose with TaTEDO's activities. TaTEDO is close to the local communities and more familiar with local situations. The Government Ministries provide enabling environment through, policies and expert support, information sharing, authorization, issue licenses, logistic and expertise support, policies, strategies and legislations.

- **TaTEDO Members**

This is a group of people who believes in the mission and vision of TaTEDO and who intend to address the challenges of energy access poverty in Tanzania. These are committed people intending to contribute resources and efforts to ensure there is movement of processes and activities for developing the organization and performance on energy poverty alleviation in the country.

- **Development Partners**

These are donors who contribute resources in order to be used to meet objectives of TaTEDO and with similar objectives of working toward achievement of increasing access to sustainable energy services. There are different ranges of development partners. These are local funding agencies, multilateral organizations and bilateral organizations

CHAPTER 8: STRATEGIC MAP, FUNCTIONAL AREAS AND STRATEGIC OBJECTIVES

8.1 Strategic Map

The process of creating the strategy map was in one particular dimension an exercise in developing strategic objectives. An important step in this was the formulation of a series of strategic responses for each driving force prioritized. This enabled the articulation of indicators of impact on the significant challenges identified in the environment. On the other hand, since strategic responses are implemented through resources, ideas and people located in functional areas, summary statements of strategic responses allocated to each functional area formed a specific strategic objective of TaTEDO.

The strategic map is a planned response to prioritized driving forces. The map would guide the activity planning for five years and includes six prioritized driving forces (formulated as opportunities and threats), functional areas of TaTEDO, strategic response (summed up as strategic objectives for each functional area) and indicators of impact for each driving force.

8.2 Functional Areas

TaTEDO responds to the needs currently identified through five key strategic areas. The following are the functional areas of TaTEDO.

i) Key Functional Area: Promote access to sustainable energy technologies and services: This result area directly addresses the mission and mandate of TaTEDO for increased access to sustainable energy to the majority of the population and communities for environmental conservation and poverty reduction. This will be achieved by effective community mobilization, awareness creation and sensitization of communities and leaders on the benefits and impacts of adoption of SETs on livelihoods and the environment.

ii) Other Functional Areas

▪ Capacity Building

Capacity building is the core function of TaTEDO's initiatives. In the process of building capacity, the organization has supported improvement of the technical and business capacities of entrepreneurs and community as a whole to manage and implement sustainable energy activities. Capacity building starts with awareness creation and technologies promotion and transfer. This is followed by provision of technical skills in order to enable target groups to produce and disseminate technologies and capacity building through training, provision of energy technology production facilities and working tools. In order to speed up and create sustainability in the process of dissemination of sustainable energy technologies, the organization has managed to undertake training on entrepreneurship and business skills to target groups.

- **Community Mobilization**

TaTEDO uses participatory approaches as a major entry point for community mobilization and introducing sustainable energy technologies and related services at community levels. This has been facilitated through different participatory tools i.e. meetings and workshops in selected villages. The public meetings are also used for community mobilization and these meetings are major factors for bringing together beneficiaries for the purpose of creating awareness and forming sustainable energy groups (SEGs). Several awareness creation methods such as organizing seminars at district level to discuss strategies for scaling up the use of sustainable modern energy technologies and services have been undertaken to sensitize target groups and beneficiaries.

- **Knowledge and Information Management**

TaTEDO will continue with efforts of developing a system for collecting and managing information from different sources and the distribution of that information to relevant stakeholders and different audiences in urban and rural areas of Tanzania. The aim of this system is to contribute to the decision-making process of facilitating access to sustainable modern energy technologies and services. In order to efficiently manage both qualitative and quantitative information from different sources, the organization has managed to build capacity for acquiring, storing, processing, disseminating information for planning, awareness creation, technology capacity building and monitoring sustainable modern energy development activities. The information system also involves monitoring and evaluation of outcomes of the interventions at different hierarchies of community. The M&E enables to document and review TaTEDO's experiences in the assessment and evaluation of impact for improving TaTEDO's services and systems.

- **Social Energy Entrepreneurship**

The future focus shall be to strengthen the social entrepreneurship (revenue generating activities) for TaTEDO by creating a new model where business principles, market characteristics and values (competition, diversification, entrepreneurship, innovation and a focus on the bottom line) co-exist and work with communities to serve the public interest. This will enable TaTEDO to grow and perform their functions effectively, reduce dependency, support growth of associated enterprises and networks and promote networking, lobbying partnership and advocacy. TaTEDO seeks to attain financial sustainability through enhanced networking with partners and stakeholders, strengthen public private partnerships, develop new revenue generation avenues, promote, establish and manage energy social enterprises. Strategic links with banks and other financial institution and other business will be established.

- **Resource Mobilization**

As a strategy to address financial sustainability enhanced resource mobilization from both local and international markets shall be critical. This is based on the need to increase access of sustainable energy services and technology to the majority poor while ensuring the operations of TaTEDO are supported sustainably. It shall focus on identifying alternative sources of revenue to reduce dependency on development partners (accounting for about 90% of the annual budget),

streamline operations and lobby for enhanced long-term funding, increase proposal writing, and undertake capital campaigns and online fundraising.

- **Networking and Advocacy**

The organization will continue to participate in an advocacy and networking activities in order to influence policies and decisions of resource allocation and planning priorities at national and local levels through partners and activists in the energy sector. These activities will also enabled to create awareness of rural energy development issues, influence policies and get public opinion, increase the visibility as well as impact of partners' efforts in facilitating access to sustainable modern energy technologies and services.

8.3 Strategic Objectives

The strategic objectives portray ways in which TaTEDO needs to respond, in order to be relevant and effective in providing sustainable services or support its stakeholders, given the predominant opportunities or challenges prioritized for 2013 and 2018. The objectives are, in effect, summations of the intent of TaTEDO, at each functional area level, with regard to significant challenges noted in its environment.

The strategic objectives concretely describe the intended course of action for each functional area of TaTEDO and they focus the organization on what it will need to do. The remaining challenges for the organization is to ensure that most stakeholders know the strategy and how it is unique so that TaTEDO in partnership with key stakeholders can spend more time on tasks that are key to executing the strategy. This will also enable resources and action planning to be more effective.

Strategic responses in the strategy map are the definitive action areas that enabled TaTEDO to meet its strategic objectives. Out of these strategic responses, specific activities were developed (Annex 1). Such activities, or action plans, include details of resources required and time horizons for their accomplishment.

The strategic map was unpacked as shown in Annex 1, to show the relationship between functional areas of TaTEDO and its related strategic objectives. The TaTEDO Strategy Map is as shown in the matrix hereunder:

TaTEDO STRATEGY MAP (January 2013 –December 2018)

PRIORITIZED CRITICAL ISSUES IN TaTEDO ENVIRONMENT					
TaTEDO FUNCTIONAL AREAS	1)Adoption of sustainable energy products and services is important responses to energy, climate and resource mobilization	2)Improved methods of organization operations and management	3) Financial challenges due to changes in the global sources which have created liabilities and reduced operations and services to the community	4) Motivation of staff and organization performance are enhanced through encouraging environment in the workplace	OUTCOME FOR EACH STRATEGIC PLATFORM ↓
CAPACITY BUILDING	STRATEGIC RESPONSES & ACTION PLAN				Available knowledge and skills, investment, structure, staff and financial resources for TaTEDO activities.
ENERGY SOCIAL ENTREPRENEURSHIP	Increase technical capacity development for partners and supporting target groups (s)	Ensure TaTEDO has optimal skilled number and appropriate staff for its activities	Facilitate development of sustainable energy infrastructure at the community level(l)	Social Entrepreneurship, and marketing skills development for staff and partners (m)	Increased levels of operations and demands of products and services from social enterprises
RESOURCE MOBILIZATION	Increase energy access for the majority population in different hierarchies of communities	Develop systems, approaches and market networks for energy social enterprises (l)	Support social enterprises to improve existing business and marketing services (m)	*Diversify innovative methods of energy social entrepreneurship and sustainable energy financing (m)	Enough Resources are available for TaTEDO recurrent and development budgets
ADVOCACY AND NETWORKING	Undertake capacity building package of preparation of both development projects (s)	Reduce operational and recurrent expenditure for TaTEDO (s)	Mobilize resources for development and business services from different sources (s)	Put in place incentives for resource mobilization and for maintaining human resources (s)	Expanded local capacity in networking, lobbying and advocacy for improvement of energy technology and services
INFORMATION AND KNOWLEDGE MANAGEMENT	Lobbying for sustainable energy services at local, national, regional and international levels (s)	Strengthen Techniques for lobbying and advocacy (m)	Develop skills for dialoguing and advocacy for more financial support(m)	Assessment of different sources of financial resources and their support areas (m)	Enabling effective information flow to promote advocacy, policy development and capacity to increase access to sustainable modern energy
COMMUNITY MOBILIZATION	Document, store and disseminate information and knowledge for different applications of sustainable energy (s)	Enhance information and knowledge management activities for key stakeholders (l)	Enhance financial management at all levels (s)		Promote and influence community access, adoption and use of sustainable energy technologies and services
OVERALL STRATEGIC OBJECTIVES	Create awareness to key stakeholders in order to adopt the use of sustainable energy technologies(s)	Expand the role of district and village energy teams to include monitoring and dialogue on sustainable energy technologies and services (l)	Enhance capacities of local entrepreneurs to operate sustainable energy technologies and manage related business(s)	Raise awareness on gender based barriers and cultural traditions that hinder adoption of sustainable modern energy technologies (s)	
OVERALL STRATEGIC OBJECTIVES	Increased number of beneficiaries using modern energy technologies and services while mobilizing funds	Effective institutional framework for sustainable energy access services	Adequate fund is mobilized through investments and diversified sources of external local and business efforts.	Participatory decision-making, motivated staff, improved working relationships and performance at all institutional levels	

During implementation of the above strategic responses and action, the proposed strategic plan will also address the crossing cutting issues of the environment (through energy efficiency), gender (equitable sharing of benefits in the communities), good governance (involvement of community), poverty reduction (through income and improved quality of services), etc. The increase in access to sustainable energy services will also contribute to the efforts of addressing challenges of climate change, energy poverty, energy security and energy other related global and local environmental impacts (in-door air pollution, forest conservation, etc.) .

CHAPTER 9: UNPACKING THE STRATEGY MAP

The strategy will comprise of different actions depending on Strategic Platforms and critical issues shown in the strategy matrix. The links between creating access to sustainable energy technologies/services and resource mobilization targets will be clearly established and implemented. The following are actions unpacked from the strategy map above in the form of short, medium and long term strategic functions:

9.1 Short Term Strategic Functions

Create awareness to key stakeholders to adopt the use of sustainable energy technologies

The extremely low awareness and understanding of the technologies among the population at large and the potential market stakeholders in the country have limited adoption and market growth. Create awareness to the key stakeholders is important for creating demand and adoption of sustainable energy technologies. This could be done by organizing seminars at different levels to discuss strategies for scaling up the use of sustainable modern energy technologies and services. The objective of sensitization is to increase awareness among the general public, especially users, producers, entrepreneurs and decision makers on the potential benefits accruing from greater use of sustainable energy technologies.

Raise awareness on gender based barriers and cultural traditions that hinder adoption of sustainable modern energy technologies

Although gender refers to relationship between men and women in performing their day to day activities, women are inadequately represented not only in decision making but also in social division of labour. The strategic plan will strive create awareness on gender based barriers and cultural traditions that hinder adoption of energy technologies. These include reducing time and frequency of fuel collection, in-door environment with poor air quality due to smoke in the kitchen, decision of buying stoves, red eyes due to smoke from three stone stoves, own their energy productive activities, etc. Awareness on sustainable energy technologies and access to better energy services will reduce gender based barriers and improve social and economic status of women in different levels of community.

Develop technical capacity for partners and supporting target groups

The initiative would encourage TaTEDO to work with technicians to support its activities whenever needs arise. There are a large number of technicians for developing sustainable energy technologies. These are **technicians for solar energy, Energy Service Platform (ESP), wind, small hydro, baking, etc.** TaTEDO will continue to ensure technicians will receive a necessary and required knowledge and skills for developing and managing sustainable energy technologies and services

Lobbying for sustainable energy financing at local, national, regional and international levels

Efforts to work with other stakeholders to form teams of experts who will lobby for more resources from the government, development partners, financial institutions, regional bodies, government, corporate sector and local government will be formed. The joint efforts of different stakeholders will increase chances of getting more funds from these sources.

Prepare and Undertake capacity building package for preparation of both development and business projects

It will be necessary to have staff in the management who have the required knowledge and skills of preparing feasibility studies, concept notes, project appraisal, business plan, etc. The knowledge of preparing such documents in general and specific information for each type of project i.e. solar, biomass, small hydro, ESP, SEEC, etc. should be considered during capacity building. The capacity building will also make it necessary to find out format requirements for each funding agency.

Enhance capacities of local entrepreneurs to operate sustainable energy technologies and manage related business enterprises

The focus of this activity will be to impart knowledge and skills of business development services to the partners and technicians in order to ensure the energy technologies and services for established will be managed profitably and sustainably. The TaTEDO will use business development officers (BDOs) to coach local on business development skills. These BDOs will be used to transfer business skills to the local partners who will impart these knowledge and skills to technicians.

Mobilize resources for development and business services from different sources

TaTEDO is responsible to facilitate resource mobilization needed to effectively address requirements of sustainable energy technologies and services. The financial resources are required to secure financial commitments from different sources and ensure availability of the funds needed for development and recurrent activities. TaTEDO requires both short and long term projects. The smallness or largeness is determined by financial resources and duration. The Board and Management will strive to ensure all emerging opportunities of Call for Proposals and other off-line opportunities are exploited for the benefit of organizations and target groups. .

Put in place incentives for resource mobilization and for maintaining human resources

Appropriate staff should be encouraged to mobilize resources by putting a separate incentive packages. In order to maintain staff, the existing personnel should be adequately remunerated. Proper regulations should be able to ensure each staff is getting appropriate incentives and remunerations.

Document, store and disseminate information and knowledge for different applications

The information systems should be revamped to manage information, knowledge and experiences which will be acquired from different organization activities. It will be necessary to keep all statistics related to development and business activities in order to enable different departments and enterprises to report and assess growth of their businesses and impacts of these interventions in the customers.

Enhance financial management at all levels

It is important for TaTEDO to ensure effective management of its finances through adhering to financial Regulations by extending control to the project coordinators and enhancing a greater transparency and accountability in the financial management issues. The transparency and control also can be improved by involving Part Time Internal Auditor and Risk Manager. A board financial sustainability committee must check on a monthly basis detail financial status (income and expenditure) of the organization and report financial status to the board meeting every detail of the fund expenditure and income. A set of financial management tools should be used to

show financial status of the organization each month. Good financial management should be able to give management signals of alarming financial situations and propose measures to be taken to avoid financial crisis of any kind.

The organization will use Mango Health Check Tool and Accountability Dialogue Tool from time to time to assess performance of the organization in terms of finance and institutional accountability.

9.2 Medium Strategic Functions

Social Entrepreneurship and marketing skills development for staff and partners

The activity intends to assist staff and partners to be more enterprising oriented in thinking. The staff and partners should learn on how to support business and marketing of goods and services.. The skills will create more capacity and efficiency of training energy business entrepreneurship for Sustainable Energy Groups (SEGs) and energy entrepreneurs.

Ensure TaTEDO has optimal number and appropriate committed staff for its activities

The organizational structure has been redesigned and the number of staff for TaTEDO should be determined to accommodate social enterprise and this strategic plan. The optimal number of staff will be required in each department to ensure all activities are performed according to the needs of the organization. The re-plan and rearrange leadership, management, and departmentalization of the organization have been proposed. The right number and positions of staff will be determined as may be required in each department to ensure all activities are performed according to needs of the time and projects.

Develop skills for dialoguing and advocacy for more financial support

In conjunction with advocacy, efforts will be made to build capacity of some staff in order to acquire skills of building bridges and advocating for international financial resources. These are people who will get training in order to penetrate and dialogue with staff at bilateral and multi-lateral organizations to implement sustainable energy development activities. This requires partnership with international organizations who will link to these organizations.

Support social enterprises to improve existing business and marketing services

The current business lines for social enterprises including selling improved stoves, producing and selling charcoal briquettes, developing MFPs with Mini-grids and sustainable energy trainings should be improved. The following business growth strategies could be applied for supporting existing and new business lines:

- ***Market Penetration.*** The least risky growth strategy for social enterprises and aim is to simply sell more of current products and services (stoves, briquettes, trainings, solar PV, Mini-Grids, etc.) to its current customers. The best way to achieve this is by attracting non-users of Sustainable Energy products and services and finding new ways for customers to use Sustainable Energy products.
- ***Market Development.*** The next step up the ladder is to devise a way to sell more of current products and services to an adjacent market - offering its products or services to customers in

another districts, regions and countries. This will target non-buying customers in currently targeted segments and target new customers in new segments.

- *Alternative Channels.* This growth strategy involves pursuing customers in a different way such as, using supermarkets, selling products online, etc. Using the internet, emails and social media as a means for your customers to access your products or services in a new way.

Diversify innovative methods of energy social entrepreneurship and enhance sustainable energy financing (m)

The social enterprises will ensure there are innovative methods to facilitate dissemination of sustainable energy technologies. The income which will be accrued from the social enterprises will be ploughed back in order to finance more sustainable energy technologies and services. The systems, approaches and marketing activities are required to set a Revolving Fund to support more entrepreneurs who will invest in small energy access social enterprises. Systems and methods are required for managing the revolving funds to further support more sustainable energy services.

9.3 Long Term Strategic Functions

Facilitate development of sustainable energy infrastructure in the community

In the long run TaTEDO will establish collaborative efforts for implementing medium size power projects. Such projects include solar farms, biogas plants for community, mini-grids of different types, etc. The opportunity for developing infrastructural project is huge especially in rural off-grid areas. Some of these projects will be site specific depending on availability of raw materials. Such infrastructure will produce electricity and TaTEDO and partners will work with power utility to feed electricity into the national grid.

Increase energy access for the majority of the population in different communities

Majority of population in the off grid areas are facing problem of lack of access to modern energy technologies and services. Low access to sustainable energy technologies and services has obviously suppressed economic growth that is manifested in low levels of productivity and services delivery, which further perpetuates poor livelihoods in the community. It is important to increase energy access for the majority in different communities.

Strengthen Techniques for lobbying and advocacy

Most of energy partners and practitioners lack appropriate skills and tools for campaigning, lobbying and advocacy for issues which hinder development of sustainable energy services at the national and local levels. The capacity building efforts for lobbying and advocacy are important for staff and partners in order to understand different approaches and techniques to be applied during campaigning for policies, strategies and changes in the energy sector.

Enhance information and knowledge management activities for key stakeholders

The existing and new activities of collecting, tapping, storing, retrieving and disseminating information and knowledge should be organized in such a way that it continue to benefit stakeholders. It is proposed that activities of managing information and knowledge from projects to be coordinated jointly with in each department and partners, assigned to one staff but responsible staff should meet quarterly to discuss how to put them in the library or e-library for future use.

CHAPTER 10: RESOURCES MOBILIZATION

10.1 Financial Resource Requirements

Financial sufficiency and sustainability is one of the core objectives in this strategic plan. This is especially critical given the need to increase access to sustainable energy services and technology for the poor majority while ensuring the operations of TaTEDO are supported sustainably. During the plan period, it will be necessary to identify alternative sources of revenue to reduce dependency on donors (now accounting for about 90% of the annual budget), strengthen the business enterprises, streamline operations and lobby for enhanced long-term funding from partners and enhanced partnerships with entrepreneurs and communities. The structural problems and capacity limitations or excesses will have to be critically studied to ensure that the resources are adequate and are optimally deployed for the benefit of staff and the organization. Hybrid interventions that combine internal competencies and outsourcing may need to be considered—particularly in respect of specific activities or general process re-engineering.

10.2 Summary of Resource Requirements

To achieve the strategic objectives and realize its stated goal for the plan period, the total funding requirements for the organization is estimated at **Tshs 5,078,893,440**. The table below summarizes the TaTEDO estimated budget.

Functional Areas	Funds (Tshs)
Capacity Building for practice and development of sustainable energy technologies and services	2,432,102,940
Energy social entrepreneurship and market development for products and services from TaTEDO	1,488,700,000
Resource Mobilization from more diversified sources	32,860,500
Advocacy and Networking for shared learning, innovations and more financing to sustainable energy services	86,670,000
Information and knowledge management for skills and innovations	58,455,000
Community Mobilization for Implementation of Sustainable Energy Development Activities	980,105,000
Total	5,078,893,440

10.3 Strategies for Resource Mobilization

TaTEDO's main source of Revenue has been development partners' support. The desire is to strengthen the internally generated revenue and alternative fundraising to achieve a ratio that is favourable for its sustainable growth.

- **Development Partners**

Development Partners' Support have primarily targeted at enhancing access to sustainable energy and technology. Given the existence of numerous local and international organizations involved in energy sector, competition for these external resources is quite intense. To ensure sustainability and proper matching of resources to strategic activities, TaTEDO will have to review how it currently relates to development partners and explore how the number of partners from whom it draws support can be expanded.

- **Private Public Partnerships**

There is scope for arrangements of private-public partnerships in sustainable energy technologies and distribution. Benefits include a stable infrastructure base, possible spill-over to communities and more time to focus on the core business while generating revenue to support it.

- **Increase organizational income**

The most sustainable source of revenue shall be from internally generated revenue. This shall mainly come from strengthening autonomous social enterprises. This shall provide the much needed revenue to increase access to SETS for the majority and marginalized communities and conserve the environment.

- **Improve cost savings and management**

The focus shall also be on cost savings and better financial management. This shall involve aligning budgets to the strategic plan, optimize financial resource allocation and strengthen budget controls.

CHAPTER 11: MONITORING AND EVALUATION

11.1 Monitoring and Evaluation

A detailed monitoring and evaluation system will be developed in order to assess and track the performance of proposed strategic plan (2013-2018). The monitoring and evaluation formats will be developed with active participation of TaTEDO partners in consultation to other relevant stakeholders and its use agreed upon by all members.

The monitoring and evaluation system will facilitate sharing of experiences on identification of implementation successes, failures and provision of suggestions for improvements. The main purpose of the monitoring and evaluation system is to link and guide the strategic plan towards achieving the expected impact, ensuring effective operations and creating learning environment for sharing experiences and replicating lessons learned. What the strategic plan will achieve and has been discussed and presented in the strategic plan implementation matrix.

The monitoring and evaluation will enable comparison of the actual outputs (program deliverables), outcomes (purposes) and impacts with what was planned, integration of formal performance information (quarterly and annually) with the informal field impressions, for

example the acceptability, user perceptions and recommendations for improving the energy technologies and services with gender consciousness in order to suit the local situations.

Some of the partners will be used as enumerators to facilitate the implementation of strategic plan monitoring and evaluation activities including data collection and analysis, information dissemination and replication of lessons learned. The monitoring and evaluation enumerators will assist the TaTEDO partners in filling the monthly implementation charts, quarterly performance tracking charts, administration of qualitative performance assessment questionnaires/checklist, facilitation of evaluation and impact assessment interviews. TaTEDO and Partner Organizations will provide technical backstopping and capacity development of the enumerators at local levels. This will provide regular opportunities for the stakeholders to learn and reflect together in the operations, performance and impact. At the district level, the monitoring and evaluation activities will be coordinated and facilitated by the respective relevant enumerators with technical assistance from the TaTEDO Partners responsible for the particular district.

11.2 Key Assumptions and Risks

11.2.1 Assumptions

- All staff and partners have clear understanding of the concept of sustainable energy and will implement the strategic plan with common understanding
- Partners will not impose values from their own organization in the TaTEDO activities instead they are going to work with stated values.
- There will be supportive and shared national energy awareness on concept of sustainable energy by all stakeholders in the energy sector,
- Political will and support to develop sustainable energy will prevails from the sectoral to local levels
- Commitment and willingness to share information with other partners and interested stakeholders will prevail
- The current positive support and political will to address sustainable energy issues at the national and international levels will prevail.

11.2.2 Risks

- Low budget allocations for sustainable energy infrastructure hindering popularization and promotion of access by poor communities.
- Taxation of energy equipment negatively affecting ability to extend services widely.
- Energy policy that is lacking effective strategy and legal framework to support adoption of modern energy technologies.
- Low public awareness on energy policies and strategies
- Unregulated energy investment environment in Tanzania giving room to multinational companies to undermine local sustainable efforts to promote modern sustainable energy services.
- Prevalence of poor governance and corruption in the energy sector.
- Perpetuation of cultural beliefs that undermine full participation and ignore benefits to men and women.
- Inadequate capacity to install, maintain and continually adopt local and imported energy technologies.
- Rural beneficiaries' low ability and willingness to pay for sustainable modern energy services.

ANNEXES

Annex 1: Implementation Matrix of Strategic Plan

Functional Areas 1: Capacity Building for practice and development of sustainable energy technologies and services

Strategic Outcome 1: Available knowledge and skills, structure, investment, staff and financial resources for TaTEDO activities.

Strategy	Major Activities	Verifiable Indicators	Estimated Budget
Increase awareness and develop technical capacity for staff and supporting target groups (Medium Term)	Identify technicians and artisans	36 technicians and artisans selected	20,000
	Group technicians and staff according to skills required i.e. solar, baking, ESP, SEEC, etc.	12 groups formed	40,000
	Undertake technical trainings for each skill required for technicians and staff	12 technical capacity building trainings conducted	9,600,000
	Undertake entrepreneurship and marketing skills to these groups	12 business capacity building undertaken	7,200,000
	Practice both technical and business skills in the field	12 sessions for field practical conducted	1,200,000
Ensure TaTEDO has optimal skilled number and appropriate staff for its activities (Medium Term)	Develop organizational structure for TaTEDO	Functional structured developed	4,500,000
	Determine optimal manning level (staffing) for each hierarchy in the structure	Number of staff in the structure	0
	Operationalize the structure for both TaTEDO and enterprise	Responsibilities assigned to staff positions	0
Facilitate development of Sustainable Energy Infrastructure at the community level (Short Term)	Develop feasibility study, ESIA study, engineering design and business plan for energy infrastructural project	Four documents in place	10,000,000
	Invite partnership for implementation of project	TaTEDO and other partners working together	0
	Operationalize the implementation of the infrastructural projects	A project units for implementing the project in place	2,345,000,000
	Management of the infrastructural project between organization and partners	A team for project management in place	2,600,000
Develop Social entrepreneurship and marketing skills for staff and partners (Medium Term)	Develop an Business Plans for social enterprise	3 business plans in place	12,000,000
	Mobilize resources for investment and operational capital	40% of Capital for investment and operations from different sources	8,600,000
	Capacity building for the management and marketing teams	10 staff trained on business management and marketing	5,700,000
	Develop a marketing plan and network	Number of Marketing plan/networks in place	4,500,00
	Undertake marketing campaigns	3 campaigns undertaken in different areas	6,903,400
	Identify and map joint venture opportunities	6 joint venture projects in place	3,000,000
	Identify potential areas for energy generation	5 potential areas identified and study conducted	4,567,980
	Mobilize resources for generation	Investment capital obtained	5,670,890
	Negotiate with electricity supply company on operational modalities	5 meetings with power utility on operation modalities	6,700,670

Functional Area 2: Energy social entrepreneurship and market development for products and services from TaTEDO

Strategic Outcome 2: Increased levels of operations and demands of products and services from social enterprises

Strategy	Major Activities	Verifiable Indicators	Estimated Budget
Increase energy access for the majority population in different hierarchies of communities	Promote use of sustainable energy technologies in off-grid communities	50% of population reached by SETs messages and awareness information	3,000,000
	Install and manage productive sustainable energy systems in off-grid areas	Number of productive energy systems	300,000,000
	Install sustainable energy systems for institutions and SMEs	Number of sustainable energy systems for institutions and SMEs	600,000,000
	Assign responsibilities to each partner on management of installed systems	25 partners assigned responsibilities	30,000,000
Support development of systems, approaches and market networks for social enterprises (Long Term)	Prepare a document for systems and approaches (business model)	A document for systems and approaches developed	10,000,000
	Prepare document for Market networks for selected product line	A document for market networks developed	5,000,000
	Operationalize business model and market networks	Business model launched and put in place	800,000
Support social enterprises to improve existing lines of business and market services (Medium Term)	Undertake market penetration to sell more SE products and services	Market assessment for stoves, solar, briquettes, etc. conducted	1,200,000
	Develop market for current products and services to adjacent markets	30 Outlets and retailers in adjacent markets contacted	200,000
	Improve products for selling in alternative market i.e. supermarkets, camps, etc.	30 Outlets and retailing points identified and contacted	200,000
	Open stores in other congested areas in the City	2 outlets in selected congested areas	28,000,000
Diversify innovative methods of energy social entrepreneurship and sustainable energy financing (Medium Term)	Develop new products and services for selling in the existing market	2 new products /services developed	24,800,000
	Revive business for solar PV systems	A solar business re-established	85,000,000
	Establish bio-centre with bio-latrines and toilet services	Two (2) bio-centre established	180,500,000
	Establish similar enterprises in zone energy centres	Two (2) energy enterprises in each zonal enterprises	220,000,000

Functional Area 3 : Resource Mobilization from more diversified sources

Strategic Outcome3: Enough Resources are available for TaTEDO recurrent and development budgets

Strategy	Major Activities	Verifiable Indicators	Estimated Budget
Undertake capacity building by preparing development projects (Medium Term)	Assess the requirements of both development projects	Development requirements assessed	300,000
	Develop Development Projects according to requirements	Project proposal prepared	10,000,000
	Solicit Financial Resources for Implementing these activities	Fund sources identified and contacted	650,000
	Implement Project according to Project Action Plan	Number of projects managed and implemented as per AP and budget	15,670,000
Reduce operational and recurrent expenditure for TaTEDO (Short Term)	Assess operational and recurrent expenditure	Recurrent expenditure assessed	500,000
	Find the way of reducing unnecessary costs	Study for 50% reduction of recurrent budget	3,000,000
Mobilize resources for development and business services from different sources (Short Term)	Prepare projects according to call for proposals	Number of project proposals prepared	650,000
	Submit and make follow up on prepared project	Project proposal submitted	50,000
	Implement Project according to Project Action Plan	Report of Progress of projects implemented as per AP and budget	890,000
Put in place incentives for resource mobilization and for maintaining human resources (Short Term)	Assess amount of funds allocated for staff from different projects and businesses	Salary funds sorted and put in one bank account	50,000
	Allocate Bank account for staff salaries	A bank account opened for staff	650,500
	Monitor salaries and incentives according to financial regulations	Salaries and incentives monitored	450,000

Functional Area 4: Advocacy and Networking for shared learning, innovations and more financing to sustainable energy services

Strategic Outcome 4: Expanded local capacity in advocacy, research & consultancy for improvement of energy technology and services

Strategy	Major Activities	Verifiable Indicators	Estimated Budget
Strengthen Techniques for lobbying and advocacy (Medium Term)	Participate in lobbying and advocacy, and campaigning training for different techniques	Number of training attended by staff and partners	6,000,000
	Train lobbying and advocacy to other partners and staff	Number training conducted by TOTs	9,200,000
	Lobby for conducive policies, strategies and programmes	Number of lobbying events practiced by partners	7,500,000
	Document advocacy lessons and challenges for improving future advocacy activities	Number of lessons documents prepared	5,500,000
Lobbying for sustainable energy financing at local, national, regional and international levels (Long Term)	Assess and solicit financial resources from national financial sources	Four (4) sessions of negotiating with local development partners and the corporate sector	5,800,000
	Assess and solicit financial resources from regional levels	Two (2) session for accessing financial resources at the regional levels	13,000,000
	Assess and solicit financial resources from international levels	Several sessions of discussing on financial resources with international organization	14,500,000
Develop skills for building bridges and advocacy for financial resources support (Long Term)	Conduct assessment of financial sources and their areas of operations	Number sources identified and accessed by TTD and partners	2,800,000
	Campaign more funds for sustainable energy and climate change resources	Number of events attended for campaigning	14,670,000
	Collaborate with other partners to write projects and mobilize resources	Number of projects prepared and resources mobilized	10,500,000

Functional Area 5: Information and knowledge management for skills and innovations

Strategic Outcome 5: Enabling effective information flow to promote advocacy, policy development and capacity to increase access to sustainable modern energy services

Strategy	Major Activities	Verifiable Indicators	Estimated Budget
Enhance information and knowledge management activities for key stakeholders (Long Term)	Nominate information and monitoring staff from each partners	staff nominated for monitoring	6,000,000
	Assign clear responsibilities to each IMS	A document for responsibilities	550,000
	Conduct training for IMSs	Three (3) sessions of training per annum	2,750,000
Document, store and disseminate information and knowledge for different applications of sustainable energy (Short Term)	Establish systems of retrieving and storing information	Quality of Information for sustainable energy development stored and shared with different stakeholders	16,300,000
	Improve dissemination of information for business and development expansion	Staff for preparing information dissemination materials (8 man-days per week)	14,800,000
Enhance Financial Management at all levels (Short Term)	Improve and adopt the existing financial monitoring system	A study for improving financial system conducted	3,100,000
	Introduce the format to the account staff	One (1) format for FM&E established	5,000
	Agree on frequency of reporting financial status	A meeting with finance department	50,000
Increase access to information and knowledge on Sustainable energy services for staff and partners (Medium Term)	Install Energy Information database and e-library	Information systems installed	400,000
	Publish articles in the public newspapers and TTD newsletters	6 articles published in local and international newspapers	3,000,000
	Maintain TaTEDO local area network (LAN)	A LAN in place	11,500,000

Functional Area 6:Community Mobilization for Implementation of Sustainable Energy Development Activities

Strategic Outcome 6: Promote and Influence community access , adoption and use of sustainable modern energy technologies and services

Strategy	Major Activities	Verifiable Indicators	Estimated Budget
Create Awareness to key stakeholders to adopt the use of sustainable modern energy technologies. (short term)	Develop/adopt proven approaches and methodologies for effective implementation of project activities	Implementation approaches and methodologies for implementing programmes adopted by August 2016	2,800,000
	Prepare sensitization strategies with district and village authorities, local NGOs and CBOs	Number of sensitization strategies, including Radio, Poster, Leaflets, T-shirts, etc.	3,500,000
	Conduct demonstrations on the functioning of sustainable modern energy technologies, services and identify businesses potentials	At least 120 demonstrations on different modern energy technologies conducted in strategic place i.e. schools, hospitals & markets in 34 districts by year 2012 and several related business identified and supported.	5,300,000
	Install and increase use of Sustainable Modern Energy Technologies	Number of Sustainable Modern Energy technologies adopted in more than 11 regions of Tanzania	750,000,000
Expand the role of district and village energy teams to include monitoring and dialogue on sustainable energy technologies and services	Conduct awareness raising and capacity building to district and village energy teams on the new sustainable energy technologies	34 awareness raising workshops to districts and village energy teams	1,500,000
	Strengthen capacity of local partners and target groups to understand, assess and contribute in sustainable energy and climate change reduction programmes	Number of effective partners implementing sustainable energy activities	450,000
	Assist village energy teams to provide supervision and implement different sustainable energy service at the local level	Number of properly managed sustainable energy technologies and services	100,000
Raise awareness on gender and cultural traditions that hinder adoption of sustainable modern energy technologies	Identify gender and cultural traditions that hinder adoption of sustainable energy technologies	Reports on adoption hindrance of gender and cultural traditions to SETs	9,500,000
	Empower local communities to adopting sustainable modern energy technologies with gender equality and remove cultural barriers	34 awareness creation and promotion events for local communities	20,000,000
	Assist TaTEDO partners to mainstream gender in their programmes/projects	Number of women and men participating in the development projects by year 2017	7,450,000

Enhance capacity of local entrepreneurs to operate and manage sustainable energy technologies and services	Identify and organize energy technicians and entrepreneurs' groups	At least 50 artisan groups and 200 entrepreneurs identified by year 2016.	15,768,000
	Identify support needs (technical, business and financial) for technicians and entrepreneurs	Support needs for the groups identified by year 2015.	144,450,000
	Provide technical and business skills support to the identified groups	At least 34 training groups (one in each programme district) organized and conducted to the identified groups by year 2017	5,670,000
	Organize study tour among artisan groups and entrepreneurs	At least 20 study tours organized by year 2017.	6,700,000
Enhance local level NGOs and CBOs to promote, monitor and coordinate sustainable energy activities at the local level	Establish and strengthen District Sustainable Energy Development Teams with clear roles and responsibilities	Number of teams established contributing to sustainable energy development by year	5,600,000
	Select activities, create awareness and educate local level NGOs and CBOs through meetings and seminars on sustainable energy opportunities and approach/ methodologies for implementation	Documented proceedings of seminars and meetings	6,700,000
	Prepare sensitization strategies with local levels,	NGOs and Number of sensitization strategies, including Radio, Poster, Leaflets, T-shirts, kanga, etc.	4,500,000
	Publicize, install and increase use of Sustainable Modern Energy Technologies in the communities	Number of Sustainable Modern Energy technologies adopted in more than 11 regions of Tanzania	4,567,000