



Regional initiatives to increase energy access: the case of the East African Community

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Foreword

This briefing paper reviews the current regional energy policy of the East African Community (EAC), which aims to enhance economic and social development by sharply increasing access to modern energy sources.

The main argument of this paper is that there is a direct link between increased access to energy, economic growth and poverty reduction as “the lack of modern fuels and electricity in most developing countries entrenches poverty, constrains the delivery of social services, limits opportunities for women, and erodes environmental sustainability”¹.

Based on the East African context, this paper shows that the increased use of modern energy facilitates the achievement of the EAC development goals; namely by boosting economic development, reducing extreme poverty and achieving the Millennium Development Goals by 2015.

Doing so requires, however, expanding access to modern energy services for the poor and unserved and increasing in energy supply capacities of EAC countries. This is the main goal of the proposed Regional Strategy. In this context, expanding mandate, developing capacity and improving knowledge on energy issues of East African Community is a must. Establishing better working relationships among wide range of actors (energy operators, private sector, NGOs, Economy and Finance Ministries and international donors) within the Region will be a first step to ensure sustainable economic growth and poverty reduction.

The 15th Commission for Sustainable Development - Seizing the opportunity to share a common vision

On the basis of the findings and recommendations elaborated in this paper, it is recommended that the International Community acknowledges the endeavours of the African countries and institutions to adopt a coherent vision geared towards scaling up access to energy, and energy services in particular.

CSD-15 will be a tremendous opportunity for Africa to present a common vision of how to address this challenge of energy access on the continent, based on the following key principles:

- Creating a **long-term vision** of the role of energy access in poverty alleviation,
- Adopting a **demand-oriented and cross-sectoral energy development** to achieving overall development objectives,
- Considering the **added-value of the region** in terms of coordination for accelerating the scaling up of access to energy based on sharing best experiences and on increasing investments,
- Building a **sustainable human capacity** (training, education and research) in the Region for implementing successful energy access policies.
- Adopting a **cross-sectoral coordination and cooperation** to promote the integration of energy access into sectoral strategies and national budgets and targets,
- Devising policies that are **non technology-driven** so geared toward supporting a diversity of energy technologies and service delivery models.

Key words

Access to energy, Capacity building, Cross-sectoral approach, Demand-driven approach, East African Community (EAC), Energy, Millennium Development Goals (MDG), Poverty Reduction Strategies.

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1. The East African Community

The East African Community (EAC) was established in 1999 to act as a regional intergovernmental organization for the republics of Kenya, Uganda and Tanzania. The EAC² mainly operates through the following institutions: Summit of Heads of State and Government; Council of Ministers; Sectoral Committees; and the Secretariat.

As stated by the founding Treaty³: “the objectives of the Community are to develop policies and programs aimed at widening and deepening cooperation among the Partner States in political, economic, social and cultural fields (...) for their mutual benefit⁴.” Under this Treaty, the founding countries set out a common vision for their political unification. The Treaty “spelt out the vision and process for deeper integration”⁵ through the establishment of a Customs Union, a Common Market, a Monetary Union and “eventually a Political Federation with common foreign and security policies”⁶. While the vision of the EAC Member States is to have a politically united East Africa, the 1999 Treaty stipulates that the Community shall ensure the:

- Attainment of sustainable growth and development of the Partner States by promoting a more balanced and harmonious development of the region
- Strengthening and consolidation of co-operation in agreed fields that would lead to equitable economic development
- Promotion of sustainable utilization of the natural resource (...) while taking measures that would effectively protect the natural environment of the Partner States

While not directly mentioned in the founding document, increasing access to energy⁷, has a direct impact on the objectives of the Community. As access to energy within the region and worldwide is increasingly a point of concern, the EAC can offer the institutional framework to deal with the constraints and opportunities East African countries are facing.

In recent years, EAC priorities increasingly focus on poverty reduction and consider that improving access to energy is a means to boost economic growth, reduce extreme poverty and achieve the Millennium Development Goals (MDGs) by 2015. The current EAC Development Strategy is translating this specific interest.

2. Socio-economic Background in regards to energy poverty

It is important that the current socio-economic contexts of EAC countries are fully understood to highlight how increased access to energy will enable these countries to reach the MDGs.

a. Macroeconomic and Human Development data

Despite high inflation rates and Government Budget Deficits⁸ (excluding grants), overall the macroeconomic trend in the three countries has been positive. Since 1999, “Uganda and Tanzania have respectively experienced an average growth of 5 and 4.8% while Kenya has seen an (...) average growth of 1.3% per annum”⁹.

Although the EAC countries are relatively prosperous compared to other African nations, levels of poverty remain high: “the Human Development Index (HDI) ratings for the region have remained between 0.4 and 0.5, which puts them within the lowest quartile globally”¹⁰ and the level of poverty remains very high: 38% of the population lives on less than \$1 a day and 70% with less than \$2 a day (period 1990-2002).

Restricted State spending in social services, privatization and the development of national infrastructure has resulted in higher GDP in EAC countries; but has failed to significantly reduce poverty and increase Human Development. Contrary to international expectations, additional wealth is being capitalized by the upper quintile of the population and is not reaching the underprivileged.

b. Access to energy

Currently, the rate of access to modern energy sources remains very low: electricity or LPG¹¹ are available only for a few urban centres and economic structures, with the majority of the poor excluded¹². In total, “less than 3 % of the East African rural population and 32 % of its urban population is connected to the national (electricity) grids”¹³. In addition, inadequate and unreliable access to modern energy remains a significant constraint to the development of industrial activities and increased agriculture productivity.

	Energy Consumption		Electrification	
	Biomass	Modern	Urban	Rural
Kenya (% of pop.)	70	30	46	4
Tanzania (% of pop.)	90	10	38	2
Uganda (% of pop.)	93	7	8	1

Source: United Nations; UNDP 2005.

The negative impact of lacking access to energy is mostly related to Health and Education, which together represents 5 out of the 8 MDGs¹⁴. Another significant indicator is the impact at community level, with health and educational institutions such as schools, clinics and hospitals being particularly at risk. The inability to connect to modern energy services (see table below¹⁵) prevents these institutions from delivering much needed health and educational services. Furthermore, in terms of access to modern energy, women in particular are disadvantaged within the household: “Energy has an explicit gender dimension when considered from the poverty point of view”¹⁶.

	Social Services
Kenya (% electrified)	6.6
Tanzania (% electrified)	3.1
Uganda (% electrified)	2.2-3

The EAC is confronted with a mounting paradox between the recent interest of the international community to energy related and poverty reduction issues; and the limited progress in terms of progressive (...) policies at the national level¹⁷. At the current rate, doing ‘business as usual’ will not enable EAC countries to reduce extreme poverty by 2015, nor will it keep up with the anticipated population growth in the region. The “urban electrification gap will remain above 50% by 2015 in urban areas”¹⁸ and the rural electrification gap will remain above 90%.

To address both the gap and the paradox and in respect of the numerous challenges the region is facing, the EAC launched a two pillar process in line with the Regional Development Strategy; an East African Power Master Plan, to increase regional supply capacity; and a Strategy on scaling up access to modern energy services, to boost energy services access for unconnected populations.

3. The Third EAC Development Strategy: how to develop and adequate energy policy

The EAC adopted a Development Strategy approach to facilitate the implementation of the Treaty. Although the energy supply was one of the policy & program areas of action for implementation, the 2nd EAC Development Strategy (2001-2005) did not directly mention energy as a specific area.

a. Priorities of the strategy

The 3rd EAC Development Strategy (2006-2010) focuses on the challenges the Community is facing, in order to identify the areas for priority interventions. Among these challenges, the most significant are: globalization; high poverty levels; low access to energy; and the rising price of oil. This latter challenge “is likely to have considerable implications on the oil importing East African economies considering that the current level of oil dependence is high (at 3.5 % of the GDP) and is likely to rise further as these countries industrialize”¹⁹.

The objective of the 3rd strategy is to highlight its potential capability to reduce extreme poverty and to boost economic growth in the region. Taking into account that increasing access to energy services

should help implement the Strategy, the document spells out the Key Pillars of East African Integration, Crosscutting Priority Intervention and Sectoral Priority Intervention.

b. Key Pillars of East African Integration

The key pillars of East African Integration aim to create an East African Federation. This should be achieved through the sequential establishment of a customs Union, a common Market and a Monetary Union. Similar to the European Coal and Steel Community, which served as the foundation for the later development of the European Economic Community, common increased access to energy policies can foster regional integration of EAC countries.

For instance, according to the Development Strategy, the envisaged consolidation and completion of the Customs Union should promote policy harmonization and convergence. In terms of fiscal incentives this should lead to a common approach towards access to energy related policies.

c. Cross cutting priority intervention

There are two different ways to link some of the eight crosscutting priority interventions²⁰ concerning access to energy: having the capacity to boost access to energy or conversely; being positively influenced by an increased access to energy. This latter link is clearly demonstrated in the two following examples:

- Combating HIV and AIDS, one of the most sensitive priority interventions in EAC, requires increased access to modern energy services. According to a UN-Energy policy paper: "electricity for communication such as radio and television can spread important public health information to combat deadly diseases. Health care facilities, doctors and nurses, all require electricity and the services that it provides (...) to deliver effective health services"²¹.

d. Sectoral priority interventions

The Development Strategy views energy as one of the Sectoral priority interventions²² together with Agriculture and Food security, Environment and Natural resources, Health and Education, etc.

For the Energy sectoral intervention: "the emphasis (...) will be to ensure availability of sufficient, reliable, and cost effective energy services which will assist in addressing the broader EAC objectives of attracting investments, and promoting competitiveness and trade (...). Some of the proposed strategic interventions"²³ are as follows: implement the East African Power Supply Master Plan; promote the energy mix system involving non-and renewable energies; implement the extension of a gas pipeline". These supply sided strategic interventions are considered the first steps in increasing access to energy.

Beyond the Energy sectoral intervention, increased access to energy can have a significant impact on the achievement of other priority interventions. In the case of Agriculture and Food security "the regional Strategy of enhancing supply capacities in agriculture will entail identifying high value agricultural sub-sectors (...) and capitalise on investments that can facilitate the shift from comparative to competitive advantages by facilitating movement up the value chain"²⁴ thus requiring additional, reliable and cost-effective energy.

As shown above, energy, either as a sectoral intervention or as a means to achieving other interventions, already benefits from an increased attention within the EAC Development Strategy. Overall, the Key Pillars of East African Integration, Crosscutting Priority Intervention and Sectoral Priority Intervention as set out in the Development Strategy are an opportunity for the EAC to go beyond a "business as usual" supply sided approach. The EAC general objective is therefore to launch policies and programs aimed at boosting economic growth and reducing poverty by increasing access to energy services. Also, it is currently developing a two-sided policy with on the one hand, the East African Energy Master Plan to increase supply capacities; and on the other hand, the strategy on scaling up access to modern energy services - demand driven guiding principle, which makes it unreservedly innovative.

4. The East Africa Power Master Plan (EAPMP): increasing the supply capacities

East Africa is endowed with abundant and cost effective resources to produce electricity, i.e. gas, geothermal, hydro and promising coal resources. These resources can meet future energy demands and if well managed, form the economic foundation of future economic growth of EAC countries.

a. Objective of the EAPMP

The East Africa Power Master Plan²⁵ (EAPMP) shows that there are economies of scale associated with electricity interconnection and trade within EAC countries. In addition, the Plan demonstrates that the development of hydro projects in Uganda and Tanzania would increase EAC capacity to produce cost-effective electricity and reduce its level of imported oil dependency. The EAPMP also provides the basis for coordinated action among the three countries, under the leadership of the East African Community. The Plan lays out a 20 year program (beyond 2015) of investment in the energy sector, with clear objectives and investment targets, to meet the expected growth in demand for power. According to the Plan, the economic rationale is clear and substantive, i.e. a coordinated, integrated approach can achieve economic benefits of some \$456 million net present value (NPV) over the next 20 years.

b. Challenges and constraints

However, the Plan calls for high-level political commitment in order to attract major private investment to the sector. The Plan states that this commitment should be translated into measures that will reduce investor uncertainty, as this type of project requires significant financial investment.

Like the Millennium Project's methodology, i.e. High Impact Low Cost, the Plan calls for fast tracking the implementation of three key projects in order to demonstrate EAC's capacity to lead this type of complex processes. These projects are the hydropower dam of Bujagali in Uganda; a 360 MW of additional gas fired power in Dar-es-Salaam (Tanzania) aimed at supplying Kenya demand; and the Arusha-Nairobi interconnector. These three projects, if underway within 18 months, will demonstrate that East Africa is acting together to meet its power needs in a Kyoto-friendly, low cost manner. The Plan also calls also for targeted activity aimed at identifying Kyoto credits that arise from implementation of the EAPMP and at monetizing these credits as a source of finance for implementation.

The Plan goes much further in terms of technical proposals and specific actions to develop. Among these, the most important proposals are: to set up an integrated electricity system for the three countries and to create an East African Power Pool.

With the Plan, EAC priority is to ensure reliable, adequate and cost effective access to modern energy sources. This access is required to unlock the development of industrial and agricultural activities and to increase household connection rate to national electricity grids in the three countries. However, the EAC crucially needs international financial and technical resources to achieve this supply sided policy.

5. Strategy on Scaling up access to modern energy services: providing access to the poor

This strategy document has been prepared following a resolution on 29 March 2006 by the EAC Council of Ministers. The strategy document is the result of extensive consultation with key stakeholders within the partner states, and with the EAC Secretariat. The strategy was approved by the EAC Council of Ministers on 17th September 2006.

a. Vision of the scale up strategy

The objective of the EAC Regional Strategy on 'Scaling up Access to Modern Energy Services Regional Strategy' is to support the achievements of the MDGs by enabling "at least half the population to have access to modern energy services by the year 2015. This means enabling 9.6 million more households and 23,000 extra localities to access modern energy services"²⁶ with an additional US \$3.4 billion in resources - part of which will be funded through end user payments.

The strategy also defines two significant concepts when addressing the topic of access to energy services to achieve the MDGs²⁷.

- Energy poverty: can be defined as the lack of sufficient choice that would give access to adequate, affordable, effective and environmentally sustainable energy services that could support economic and human development.
- Energy services: refers “to the end use applications of an energy delivery system that meet tangible and/or intangible life and livelihoods needs and social services (e.g., recreation, lighting, cooking, communications, transportation, heating)”²⁸.

b. The four strategic targets for scaling up access to modern energy services

In the process of endorsing the scaling up strategy, the EAC ratified four “targets which address the energy access challenges posing the largest risk to meeting the MDGs in the EAC”²⁹. The following targets are based on a set of progressive and demand oriented guiding principles (which is already a major breakthrough):

- Usage of modern cooking practices by 50% of those who at present use traditional biomass for cooking, including reducing indoor air pollution to safe levels, and increasing the sustainability of biomass-derived fuel production
- Access to reliable electricity for all urban and peri-urban poor
- Access to modern energy services such as lighting, refrigeration, information and communication technology, and water treatment and supply for all schools, clinics, hospitals and community centers
- Access to mechanical power within the community for all communities for heating and productive uses

c. Prerequisites to achieve the strategic targets at national/policy level

In addition to the socio-economic factors hindering the smooth functioning of the Community, Member States are aware that three prerequisites have to be addressed before reaching the adopted targets:

- EAC countries themselves to mainstream energy into MDG-based National Development Strategies (NDS)/ Poverty Reduction Strategies (PRS). The
- develop pro-poor energy policies and regulatory frameworks to attract required investments from all sources such as Official Development Assistance, the private sector and national revenue.
- building national capacity to deliver modern energy services for the poor and unserved”³⁰.

d. Focus to achieve the targets at local level: meeting the market demand

One of the main conclusions of the strategy is that there is a significant market for increased access to modern energy services. The strategy points out that MDG households³¹ (i.e. quartiles 2 to 5: excluding the top 20% income household) spend up to “\$1.2 billion a year on inferior energy services”³². This shows that part of the required resources are available through end user payments and that private sector and international donors’ assistance³³ will be needed to unlock the capacity of households to invest.

Two types of public policies are needed to enable MDG households to access energy service targeting:

- the middle-income poor populations of the EAC which cannot pay enough for private sector businesses to serve them without significant public support and intervention. Targeted interventions can create the enabling environment for profitable business models to serve these populations”³⁴.
- the lowest quartile of EAC population which requires the public sector to implement subsidized business models for granting sustainable access to energy, thus reducing extreme poverty to achieve the MDGs.

The three areas where there is need for public targeted interventions are: the market for improved cooking stoves in rural areas; the market for urban and peri-urban connection to the electricity network; and the market for community services access to modern energy services. As indicated by the strategy, addressing the needs of these markets should lead, within a few years, to the achievement of the MDGs.

e. **Next steps**

At the operational level, the EAC already defined a regional implementation framework overview, an investment plan and an activity work plan of the Strategy on scaling up access to modern energy services. This operational works needs to be translated into activities and targeted objectives.

6. Recommendations for the implementation of successful energy access policies

c. **Address specific regional issues as trade barriers, regional integration, and the transnational nature of many energy resources**

- In addition to local and national needs, if energy services are to be viable over the long term and scalable in a manner that will serve the millions in need, they will have to address larger regional and international issues such as trade barriers, regional integration, and the transnational nature of many energy resources.

d. **Integrate Energy Planning and Implementation into a long-term National Strategy**

- Ensuring that access to rural energy services is placed at the forefront of the national or rural development framework, sustained by a common vision for a rural energy demand approach and corresponding strategies and sectoral action plans to implement the vision;
- Using advocacy and lobbying to create a space for negotiations and debates and to illustrate the role of improved access to energy in promoting growth and social development;
- Coordinating existing strategies and policies (e.g. for EAC, setting along the same lines the objectives of the Master Plan and Scale up strategy) and building on lessons learned from existing energy access projects and programmes, and potential synergies. The combination of local productive enterprises, local energy resources, technical improvements in production, efficiency improvements in use, emissions control, and sustainable land-use practices can all add up, leading to productivity enhancement and simultaneous reduction in unit costs while allowing beneficial use of an otherwise potentially harmful energy source.
- Formulating policies that recognize and support the existing energy delivery systems in poor communities, in the absence of more organized efforts.

Role of EAC Secretariat

- EAC Secretariat needs to be strengthened in terms of staffing in order to implement its expanded mandate and to have national offices in the three EAC countries
- EAC Secretariat's should have the ability to enforce common agreed decisions
- EAC line Ministries should further deepen their partnership with EAC Secretariat
- EAC should ensure the principle of subsidiarity is applied in order to involve local communities in defining their needs in terms of access to energy services

e. **Design Effective Regulatory Framework**

- 'Pro-poor' energy policies will need to be implemented within a regulatory framework that prioritizes the provision of energy services to poor communities and rural areas. Regulatory frameworks should be designed that use energy as an instrument to effectively deliver social needs, stimulate productive activities, enable work that adds value in agriculture and services, and spur economic growth,
- Sustained political commitment is required to create a framework of market conditions amenable to energy-based approaches to poverty reduction. Macroeconomic policies and fiscal management should encourage economic diversification, the diversification of energy resource portfolios, the participation of communities and a larger number of private entrepreneurs in delivery systems, and the most efficient use of these resources through market incentives.

f. **Reduce Costs through Financing Mechanisms and Subsidies**

- Economic barriers limiting access to energy services by the poor can come in a range of patterns. The poor also often pay a much higher share of their disposable income (20-30 percent) than the higher income groups (5-10 percent). In other cases, high capital expenditures or recurring costs, irregular incomes, lack of access to credit, lack of legal residential status, and lack of formal legal assets for collateral can prevent the poor from obtaining energy services. Innovative financing and microfinance institutions also represent a very important development tool.

- Therefore, it is recommended to:
 - Improve the affordability, availability, and safety of energy services for increasing access.
 - Create incentives to increase generation capacity and invest in distribution infrastructure to serve a larger population.

g. Enhance Human Capacity through Education, Training, and Research

- To support national and regional infrastructure development, as well as consumer-responsive service delivery systems, education and training programs are needed for skilled technicians, planners, entrepreneurs, financial services and community workers.

The 15th Commission for Sustainable Development - Seizing the opportunity to share a common vision

Considering the recommendations above, it is required that the International Community acknowledges the endeavours of the African countries and institutions to adopt a coherent vision geared towards scaling up access to energy, and energy services in particular.

CSD-15, will be a tremendous opportunity for Africa to present a common vision of how to address this challenge of energy access on the continent.

This vision is based on the following key principles:

- Creating a **long-term vision** of the role of energy access in poverty alleviation,
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- Devising policies that are **non technology-driven** so geared toward supporting a diversity of energy technologies and service delivery models.

Endnotes

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- ¹ The Energy challenge for achieving the Millennium Development Goals (MDGs), United Nations, UN-Energy, 2005, p. 3.
- ² The EAC is about to be joined by Rwanda and Burundi.
- ³ The Treaty for establishment of the East African Community was signed by the three Heads of States in November 1999 and entered into force in July 2000.
- ⁴ <http://www.eac.int/documents/EAC%20Treaty.pdf>
- ⁵ The East African Development Strategy 2006-2010: From Cooperation to Integration, East African Community Secretariat, September 2006, p. 2.
- ⁶ Ibid., p. 2.
- ⁷ Ibid., p. 3.
- ⁸ Between 1999 and 2004, Government Budget Deficits (excluding grants) are ranging from 6.9% to 13% in Uganda and 2.1% to 11.8% in Tanzania.
- ⁹ Ibid., p. 7.
- ¹⁰ Strategy on scaling up access to modern energy services in order to achieve the Millennium Development Goals (MDGs), East African Community, October 2006, p. 7.
- ¹¹ LPG: Liquefied Petroleum Gas.
- ¹² Scaling up access to modern energy services, p. 5.
- ¹³ East African Development Strategy 2006-2010, p. viii.
- ¹⁴ Education: Goal 2 and Target 1 of Goal 3; Health: Goal 4, 5 and 6.
- ¹⁵ Scaling up access to modern energy services, p. 24.
- ¹⁶ East African Development Strategy 2006-2010, p. 14.
- ¹⁷ For further information, see Energizing poverty reduction: a review of the energy poverty nexus in PRSPs, UNDP, 2005.
- ¹⁸ Scaling up access to modern energy services, p. 20.
- ¹⁹ East African Development Strategy 2006-2010, p. 15.
- ²⁰ See pages 55-61 of the East African Development Strategy 2006-2010.
- ²¹ The Energy challenge for achieving the MDGs, 2005.
- ²² The EAC drafted a sectoral Strategy on scaling up access to modern energy services in order to achieve the MDGs.
- ²³ For further details: East African Development Strategy 2006-210, pp. 67-68.
- ²⁴ Ibid., pp. 61-62.
- ²⁵ For further information, see in The East African Power Master Plan study, Final inception report, section 7 and Final Phase II report, section 15.
- ²⁶ Scaling up access to modern energy services, p. 3.
- ²⁷ For further references, see Reddy AKN, Energy and Social Issues, in "World Energy Assessment", UNDP, New York, 2000.
- ²⁸ Expanding access to modern energy services, replicating, scaling up and mainstreaming at the local level: Lessons from community based energy initiatives, UNDP, 2006, p. 7.
- ²⁹ Ibid., p. 2.
- ³⁰ Ibid., p. 26.
- ³¹ A MDGs household can be defined as a household of on average 5 individuals living in what can be described as extreme poverty, or those whose livelihoods are the main focus of the MDGs., in Scaling up access to modern energy services, p. 22.
- ³² "These inferior energy services include cooking with fuelwood or charcoal on traditional stoves, using kerosene, dry celle batteries and candles", in Scaling up access to modern energy services, p. 21.
- ³³ For further information on the required financial assistance, see Scaling up access to modern energy services, pp. 55-68.
- ³⁴ Ibid., p. 22.