



# THE ENERGY STRATEGY

2024 – 2028

Access to Clean and  
Reliable Energy for all the  
Communities we Serve  
through the Community  
Conservancy Model



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## Executive Summary

Energy is a critical driver of prosperity and human well-being. Most areas in northern and coastal Kenya have limited to no access to the national electricity grid, resulting in the use of unreliable and unsustainable sources of energy, such as charcoal and firewood. This does not only cause carbon dioxide (CO<sub>2</sub>) emissions but is also costly and associated with severe health hazards.

The goal of the Northern Rangelands Trust (NRT) is to create resilient communities and ecosystems. To achieve this, NRT needs to develop energy solutions for the communities it serves. This Energy Strategy is aligned with NRT's overall 2024-2028 Strategic Plan and seeks to support households and institutions in NRT member community conservancies by providing the appropriate governance structures, knowledge, funding, and partnerships to increase access to clean and or alternative and reliable energy.

Recognising the broad and diverse options of emerging technologies, NRT is uniquely positioned to bring together the technical expertise of businesses, startups, and Non-Governmental Organizations (NGOs) with access to local communities united under the NRT umbrella.

The 2024-2028 Energy Strategy incorporates three key activities:

1. Fast-track the identification of suitable clean energy solutions by leveraging NRT's ability to bring stakeholders together.
2. Establish and train energy sub-committees in selected community conservancies to foster capacity-building and community-led implementation of clean energy solutions.
3. Develop tree planting initiatives in key forested areas to mitigate pressures on indigenous forests during prolonged droughts.

For each of these high-level activities, more specific sub-activities and targets have been developed. An underlying foundation for this Strategy is an emphasis on gender equality and women empowerment, which will be the primary focus in all steps that will be taken.



## Introduction: The Importance of Energy

Energy is a critical driver of prosperity and well-being for humanity. It is widely accepted that energy growth is directly linked to economic growth. Energy production needs to increase in the coming years globally to meet energy demand and support economic and social progress. In developing countries, reliable energy is needed to expand industry, move towards modern agriculture, and improve opportunities for trade and transportation. At a household level, energy is a critical part of everyday life activities, including cooking, lighting, computer and phone use, and healthcare services.

Most areas in northern and coastal Kenya have limited to no access to the national electricity grid. Local communities depend on unreliable and often unsustainable energy sources, such as diesel generators, charcoal, and firewood, with disastrous health consequences. Household air pollution from cooking fuels is estimated to kill more than two million people annually, most of whom are from sub-Saharan Africa. Women and children are particularly at risk, as they spend most of their time in the home or cooking. Furthermore, the emissions associated with these energy sources contribute to climate change. The Horn of Africa is already experiencing the harsh effects of climate change with extreme weather events, which further amplifies the vulnerability of these communities.

The importance of reliable access to clean energy is underscored by multiple national and international initiatives and targets. On a global level, the **United Nations' Sustainable Development Goals (SDGs)** spotlights one specific goal on affordable and clean energy (SDG 7). Reliable energy is needed, however, to achieve many more of the SDGs—including SDG 3 (good health and well-being), SDG 5 (gender equality), SDG 8 (decent work and economic growth), SDG 9 (industry, innovation, and infrastructure), SDG 11 (sustainable cities and communities) and SDG 13 (climate action) which are interlinked.

The African Union has developed **Agenda 2063**, which envisions Africa as an integrated, prosperous, and peaceful continent, and emphasises the creation of environmentally sustainable and climate-resilient economies and communities (Goal 7), with renewable energy as one of the priority areas for development.

At the national level, **Kenya's Vision 2030** is the country's long-term development blueprint and is motivated by a collective aspiration for a better society by 2030. The achievement of this vision is anchored on reliable access to energy as one of its foundations. Additionally, the **Kenya 2019 Energy Act** provides an energy implementation strategy that guides the development of regulations for the licensing and management of renewable energy sources, including biogas and biomass. The Act also directs the promotion, development, and use of renewable energy technologies including, but not limited to, biodiesel, bioethanol, charcoal, biogas, solar, and fuelwood, among other sources.



## Current Situation and Challenges

In northern and coastal Kenya, only major towns are connected to the national grid. It is estimated that 40% of Kenya's population is not connected to the grid. This statistic represents the majority of rural Kenya, which includes northern and coastal Kenya. NRT commissioned an Energy Capacity Needs Assessment to inform the development of this Strategy. The Assessment was conducted across all counties where NRT operates and included 591 households. Currently, the most used sources of energy by households are as follows:

- » Firewood: 76%
- » Solar: 57%
- » Charcoal: 48%
- » Kerosene: minimal use

More than half of the respondents (54%) indicated they were not satisfied with their current situation.

Four key challenges were identified during the Assessment:



**Deforestation:** The collection of firewood causes environmental degradation, which leads to soil erosion, loss of biodiversity, and habitat destruction. This leads to increased vulnerability to droughts and desertification and further exacerbates the loss of natural carbon sinks.



**Poverty:** limited access to energy inhibits the performance of income-generating activities, thus perpetuating poverty in the region. It restricts the operation of businesses, agricultural initiatives, and overall productivity, limiting the optimization of job opportunities and income generation.



**Harmful health effects:** The health of women and girls is negatively impacted by the collection, use, and combustion of solid fuels. Local health centers are frequently visited by women suffering from respiratory diseases and children under the age of five with pneumonia, which leads to premature deaths.



**Limited access to basic services:** Insufficient access to energy hinders the proper functioning of healthcare facilities (e.g., lighting for surgeries, refrigeration for vaccines), schools (e.g., lighting, use of laptops and the internet, execution of computer classes) and infrastructure (e.g., communication systems, transportation).

## NRT's Role and Endeavours So Far

NRT champions its community conservancy model, which supports community development in some of the most marginalized and forgotten areas globally. NRT seeks to serve its 45 member community conservancies (CCYs) in the following ways:

1. Provide financial and operational support where necessary.
2. Foster learning about proactive land use management.
3. Increase the self-sustaining capacity of communities by providing training and mentorship and forging partnerships.
4. Design and implement peace, livelihoods, and natural resource programs in collaboration with the CCYs.

5. Establish connections among the CCYs, development partners, and other stakeholders.

NRT can provide knowledge, operational capabilities, and connections to national and international partners on a level that would not be accessible by a single community conservancy. NRT has identified “reliable access to energy” as one of the twenty priority goals in the achievement of its long-term vision. NRT will work with a range of partners and leverage its ability to bring stakeholders together to achieve this goal, as a multi-sector approach that puts communities at the centre of action is needed.

In the past, NRT has worked with multiple development partners including the United States Agency for International Development, the Danish International Development Agency, the Swedish International Development Agency, the United States Department of the Interior, and member conservancies, to increase communities’ resilience through energy interventions, and pilot different renewable energy interventions in the following areas:

Biogas:

- » Trained 2,400 community members in biogas use.
- » Installed 550 biogas digester units.

Solar energy:

- » Installed multiple solar energy systems for various beneficiaries including schools, dispensaries, clinics, outposts, headquarters, and law enforcement agencies.
- » Equipped multiple boreholes and water pumps with solar power systems.

Through these initial endeavours, we have learnt six valuable lessons:

### **The diversity of the landscape necessitates specific and tailored solutions.**

The landscape in which NRT operates is expansive and diverse in culture, ecology, economy, and topography. Different contexts require different approaches. There is not a one-size-fits-all solution and interventions need to be tailored to the specific local situation.

### **Training and capacity building is crucial for sustainable adoption.**

Most beneficiaries lack a basic understanding of the clean energy options available due to reliance on

traditional and local knowledge. Therefore, capacity building is key. Training of beneficiaries should cover the availability of clean energy sources and the technical use of these sources. Without proper training, beneficiaries might not be able to operate the proposed interventions and are likely not to use the solutions and return to their old and familiar ways of cooking and lighting.

### **Droughts and remote locations exacerbate the complexity of finding effective solutions.**

Prolonged droughts make water and cow dung—the two key ingredients used in biogas digester units—scarce resources. Additionally, many of the communities live in remote and inaccessible locations and are nomadic pastoralists, necessitating easily implementable and flexible solutions.

### **The role of women should be central in all interventions.**

All energy interventions should be aimed at reducing gender inequalities. Both genders should have equal opportunity to participate in decision-making and the energy value chain.

### **Reforestation initiatives are essential and inherently linked to energy solutions.**

The effects of climate change and deforestation drive communities to increasingly move towards the last remaining forested watersheds during severe droughts, where they use trees as a key resource, resulting in further deforestation and desertification. To mitigate this, it is essential that reforestation initiatives be developed while finding alternative energy solutions.



## Our 2024-2028 Energy Strategy

NRT's goal is to create resilient communities and ecosystems. As energy is a critical driver in the achievement of this goal, NRT is developing solutions for the communities it serves. Based on the lessons learnt and described above, NRT has developed an energy strategy that is aligned with the organisation's overall 2024-2028 Strategic Plan.

**The Energy Strategy Vision:** Access to clean and reliable energy for all our communities.

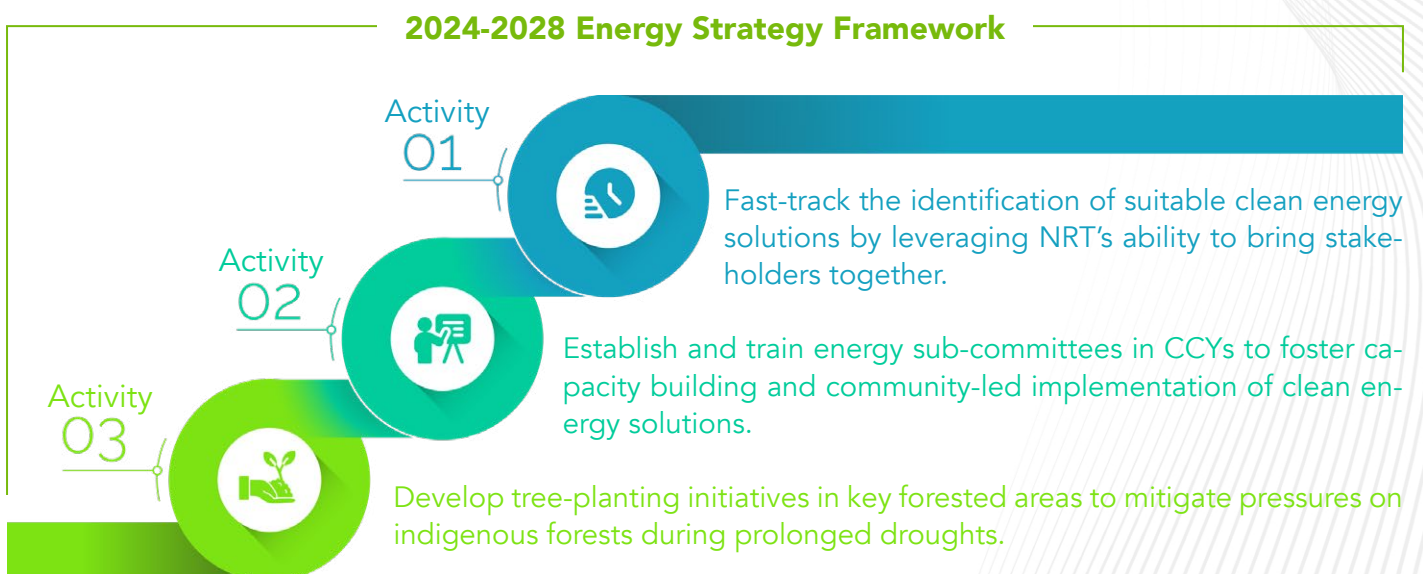
**Mission:** We support households and institutions in our community conservancies by providing the appropriate governance structures, knowledge, funding, and partnerships to increase access to clean and reliable energy.

NRT is uniquely positioned to contribute to energy solutions for two key reasons:

- **It's ability to bring stakeholders together** that is enabled through the community conservancy model. NRT bridges the gap between remote and disconnected local communities across a wide landscape, and other players such as county governments, development partners, and startups. This ensures a coordinated approach that combines single initiatives and leverages the scale of a landscape approach.
- **Deep local knowledge** of the communities due to NRT's longstanding presence in the regions and its integrated approach to community development and ecosystem protection.

Recognizing the broad and diverse options of emerging technologies, NRT is uniquely positioned to converge the technical expertise of businesses, startups, and NGOs with access to local communities that are united under the NRT umbrella.

Our 2024-2028 Energy Strategy framework consists of three sequential activities and a critical underlying foundation for everything we do.



**As a foundation, gender equality and women empowerment should be incorporated in every step and every decision.**



## Activity 1

**Fast-track the identification of suitable clean energy solutions by leveraging NRT's ability to bring stakeholders together.**

**Timeframe:** January 2024 – July 2025

This objective is aimed at accelerating the adoption of sustainable and clean cooking and lighting technologies within the communities of northern Kenya. It seeks to pilot various technologies in different communities and assess their effectiveness and impact, building an overarching understanding of the criteria for assessing technologies for different local contexts. By promoting the use of technologies such as biogas, solar power, energy-efficient stoves, and other innovative solutions, this objective envisions a substantial shift towards cleaner and more efficient energy practices.

### Sub-activities:

1. Research all emerging technologies that are available in Kenya and conduct a first assessment of their potential benefits and downsides.
2. Map the specific characteristics of the different community conservancies, such as the type of consumer, e.g., dispensary, school, household, wildlife pan or borehole, as well as the topography, politics, security, capabilities of the communities, remoteness, droughts, etc.
3. Pilot different technologies from different startups, including but not limited to:
  - a. Lighting/pumping (solarization).
  - b. Lighting/pumping (batteries).
  - c. Cooking (fuel switch, e.g., biogas, bioethanol)
  - d. Cooking (fuel efficiency, e.g., jikos)
4. Create a framework that maps the best technology with local relevance.
5. Build partnerships with selected startups/NGOs.
6. Define the criteria for prioritizing the rollout of the technologies in communities.

	Indicators	2024	2028
1.1	No. of lighting technologies piloted	1	5
1.2	No. of cooking fuel technologies piloted	1	5
1.3	No. of formal partnerships established with technology providers	1	4
1.4	No. of formal partnerships established with county governments to improve energy access	0	2
1.5	No. of community conservancies participating in energy solutions	22	40
1.6	No. of lighting projects completed (e.g., at schools, dispensaries, outposts, households, tourism facilities)	22	45
1.7	No. of clean energy projects completed (e.g., in schools, outposts, households)	850	3,000





## Activity 2 Establish and train energy sub-committees in CCYs to foster capacity building and community-led implementation of clean energy solutions.

**Timeframe:** July 2024 – December 2028

This objective focuses on empowering local communities by establishing specialized energy sub-committees within the existing community conservancy structures. These committees will decide on energy priorities, support pilot projects and the implementation of clean energy activities, and be the first point of contact for NRT and other key stakeholders. By equipping these sub-committees with the necessary training and resources, NRT aims to empower community members to become advocates and implementers of sustainable energy practices. The objective is to cultivate a platform for information exchange, capacity development, and skill-sharing to ensure the effective adoption and utilization of emerging energy solutions at the grassroots level.

### Sub-activities:

1. Develop a framework for the energy-sub committees to operate in, e.g.:
  - a. Who sits on this committee?
  - b. What is the mandate of this committee?
  - c. How often does this committee come together?
  - d. How does the committee coordinate with NRT and other community conservancies?
  - e. What resources does NRT provide to these committees?
  - f. What is the objective of the committee?
2. Define the criteria for prioritizing the community conservancies where energy sub-committees will first be established based on the framework developed under Activity 1.
3. Set up sub-committees and provide bi-annual training to sub-committee members.

	Indicators	2024	2028
2.1	No. of energy sub-committees established	0	20
2.2	No. of trainings of sub-committees conducted	0	60



## Activity 3 Develop tree-planting initiatives in key forested areas to mitigate the pressures on indigenous forests during prolonged droughts.

**Timeframe:** January 2025 – December 2028

This activity centres on the unique challenging aspects of coastal and northern Kenya, where pastoralist communities need to face the reality of a rising frequency of droughts. Following the effects of climate change and deforestation, communities increasingly move towards the last remaining forested watersheds during severe droughts, where they use trees as a source of firewood and timber. It is necessary that a wide range of solutions be developed, such as diversified economies that promote more sedentary livelihoods, clean energy sources, and education on the importance of indigenous forests. As that happens, we remain cognisant of the reality of this landscape. These initiatives will take time to complete, and there is a need to mitigate the risk of forested watersheds being lost before it is too late. This activity will specifically target the forested watersheds in northern and coastal Kenya (Ngare Ndare, Ndera, Jaldesa, and Songa).

**Sub-activities:**

1. Identify experts and build partnerships to support the development of a work plan to implement tree planting initiatives in Ngare Ndare, Ndera, Jaldesa, and Songa.
2. Map, through the energy committees, the appropriate areas for tree planting (which should have been established as a priority in Activity 2) and the different species of trees that should be planted. Tree planting can either be for the purpose of reforesting indigenous trees, or for fuel use to avoid the deforestation of indigenous trees.
3. Establish a governance structure that leads this project through each CCY's board.

**Foundation:** Gender equality and women empowerment should be incorporated in every step and every decision.

This underscores the significance of gender equality and women's empowerment in the realm of increased energy access. Recognizing the role women play in energy utilization within households, NRT aims to promote equitable opportunities for women to engage in decision-making processes regarding energy access. By providing training, support, and resources, this objective seeks to enhance women's roles in the adoption and use of sustainable energy technologies, aiming for a more inclusive and participatory approach towards the development of energy solutions in northern Kenya.

**Key Activities:**

1. Establish regular alignment and meeting cadence with NRT's Gender Department.
2. Implement training programs focused on sustainable energy technologies, providing women with the knowledge and skills to use, maintain, and promote clean energy solutions.
3. Launch awareness campaigns that highlight the importance of gender equality in energy access, advocating for the recognition of women's contributions in the decision making and implementation of sustainable energy initiatives.

	Indicators	2024	2028
3.1	No. of women trained in clean energy microfinance and credit	0	215
3.2	No. of female "clean energy champions" in indigenous communities	0	100
3.3	Percentage of women in energy sub-committees	N/A	66%

## Implementation Plan

This section elaborates on the immediate next steps, risks, and mitigation measures required to successfully achieve the outlined objectives, and the monitoring and evaluation process.

### Immediate Next Steps

Before this Energy Strategy can be implemented, the following steps need to be taken:

1. Develop a detailed work plan based on the key activities as described in this Strategy.
2. Develop a budget that includes operational and staff costs for Year 1 (including monitoring and evaluation costs).
3. Align the Strategy with donors and secure funding.

4. Establish regular meeting cadence with key internal stakeholders (e.g., Gender, Monitoring and Evaluation Departments) to review progress.

## Risks and Mitigation Measures

A few key risks have been identified that need to be mitigated.

**Financial Risks:** Lack of sustained funding might impede the timely execution of this Strategy. To mitigate this, NRT plans to diversify its funding sources, engage in innovative financing mechanisms, and advocate for continued financial support from partners and stakeholders.

**Technological Challenges:** The adoption of new technologies might face resistance or might not be suitable for all contexts. NRT plans to mitigate this risk by conducting thorough assessments, testing pilot projects, and customizing solutions to fit local contexts.

**Community Engagement and Acceptance:** Resistance or lack of community acceptance of new energy solutions may hinder implementation. To address this, NRT intends to conduct extensive community sensitization, involving local leaders, and emphasizing the benefits of proposed clean energy solutions.

**Environmental Concerns:** Tree-planting initiatives might face challenges due to climate-related issues, such as droughts, and resource scarcity. Mitigation efforts to address this include proper environmental assessments, partnerships with environmental experts, and conducting community awareness campaigns on the importance of reforestation.

## Resourcing

To execute this Strategy, team capacity needs to be enhanced. Currently, there is one full-time junior staff in NRT's Energy Department. There is a need to hire for the following roles:

- » Project officer
- » Senior energy officer
- » Digital data officer
- » Monitoring and evaluation officer

## Monitoring and Evaluation

Effective monitoring and evaluation are pivotal in assessing the progress made and impact of the Energy Strategy. Performance against the indicators outlined in this Strategy will be reviewed on an annual basis, and EarthRanger technology will be used for continuous monitoring and evaluation. The results will be presented to an annual Steering Committee to hold the team accountable.





# THE ENERGY STRATEGY

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