

Dar Es Salaam
8 December 2015

Event Report

Better Power in Tanzania's electricity sector

Workshop report on improving customer information
and feedback mechanisms



Author information

This report was prepared by Ben Garside, IIED.

About the event

IIED, HIVOS and Twaweza hosted an interactive workshop on information channels and feedback mechanisms for electricity services in Tanzania. This workshop took place on 8th December 2015 in Dar Es Salaam, and was part of the Tanzanian Energy Change Lab initiative co-founded by IIED and Hivos. See <http://www.energychangelab.org/>

IIED is a policy and action research organisation. We promote sustainable development to improve livelihoods and protect the environments on which these livelihoods are built. We specialise in linking local priorities to global challenges. IIED is based in London and works in Africa, Asia, Latin America, the Middle East and the Pacific, with some of the world's most vulnerable people. We work with them to strengthen their voice in the decision-making arenas that affect them – from village councils to international conventions.

Published by IIED, April 2016

<http://pubs.iied.org/G04024>

International Institute for Environment and Development
80-86 Gray's Inn Road, London WC1X 8NH, UK
Tel: +44 (0)20 3463 7399
Fax: +44 (0)20 3514 9055
email: info@iied.org
www.iied.org

 @iied

 www.facebook.com/theIIED

Download more publications at www.iied.org/pubs

Contents

1. Event Purpose	4
2. Research findings and Tanzanian Innovations	5
Sauti Survey highlights	5
Interviews with sector experts and others	7
3. Key issues discussed	9
Findings	10
4. Next steps	12
Annex 1: Workshop Agenda	13
Annex 2: Workshop participant list	14
Annex 3: Map of national grid customer information channels when there is a power cut	15

1. Event Purpose

IIED, Hivos and Twaweza¹ hosted an interactive workshop on **information channels and feedback mechanisms** for electricity services in Tanzania. This workshop took place on 8th December 2015 in Dar Es Salaam, and was part of the Tanzanian Energy Change Lab initiative co-founded by IIED and Hivos. See <http://www.energychangelab.org/>

Tanzania is expanding its electricity services. But the sector still faces many challenges in terms of delivering a high quality, reliable service for customers. For customers of TANESCO, the Tanzanian electricity supply company, power cuts are a major preoccupation, and have an impact on their work, domestic life and other services they use. As the grid expands, expectations of access to a connection are also increasing.

Electricity services need to be improved. There are many routes to achieving this, from more investment and infrastructure upgrades to new policy targets. One underexplored route is the information and feedback mechanisms between providers and customers. The workshop asked:

- Why are information channels, accountability and customer feedback relevant to the electricity sector?
- What do customers and citizens need better information about?
- What customer information, feedback and accountability mechanisms exist?
- What works well and why? What is not working so well and why?
- What opportunities and new innovations are emerging that could help fill the existing information gaps that exist?

The intention of the workshop was to offer a practical space for experts to explore these questions – all with the objective of improving energy service delivery. The specific workshop focus was electricity provision, both for grid-connected customers and those using modern products such as portable lights and solar home systems for their lighting needs. The workshop audience included electricity providers (grid, off-grid), sector experts, policy-makers, regulators, development partners and civil society organisations.

The workshop also introduced background research, including a survey of 2000 households conducted with the Tanzanian NGO Twaweza, which assessed customer awareness and perceptions of existing information channels associated with energy product and service delivery. The background research also brought learning from other sectors, with the intention of cross-sector examples to stimulate discussion.

Participants also brainstormed ideas on how to foster improvements. These include the following:

- a demonstration prototype mobile phone app, which was developed by young entrepreneurs during the Energy Safari social innovation event organized by the IIED/Hivos Energy Change Lab (see <http://www.energychangelab.org/energy-safari-2015/>). The app intended to illustrate the potential for better engagement with customers on power black-outs.
- Lesson-sharing from a representative of the Tanzania Renewable Energy Association (TAREA) on how to address the problem of sub-standard solar products.

¹ Twaweza, based in Tanzania, provides practical information to everyone, to foster quality independent media and citizen monitoring services.

2. Research findings and Tanzanian Innovations

Sauti Survey highlights

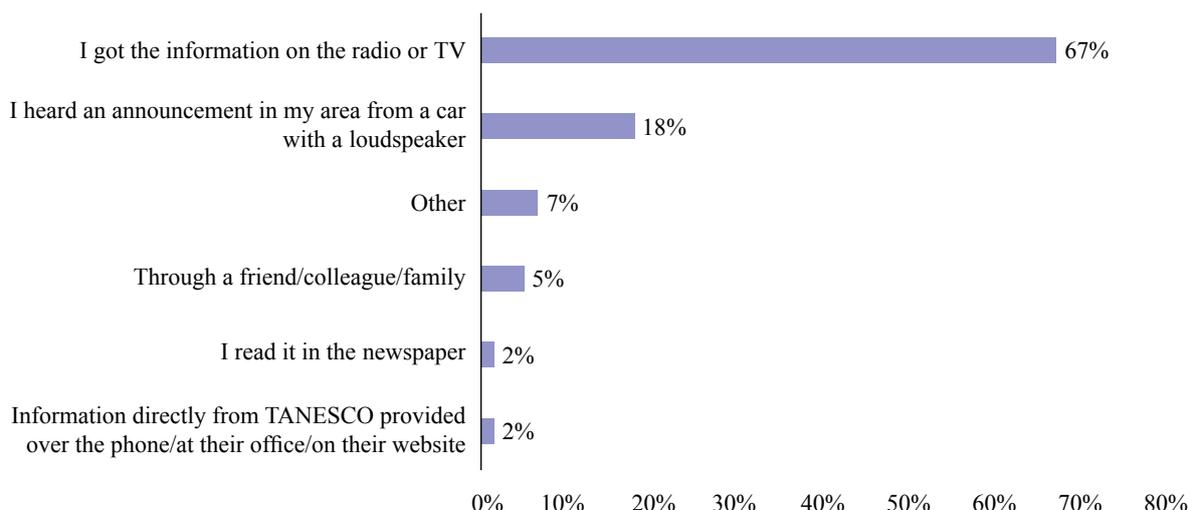
IIED and Hivos worked with Twaweza to conduct a 2000 household survey to better understand current household-level electricity product/service usage, and customer perceptions of quality/reliability of the product or service they were using. This included better understanding information availability, its usefulness, and feedback mechanisms for electricity services from the customer perspective. The survey sample group was representative of Tanzania's population spread across urban and rural areas as well as demographics. Full survey results, and the presentations given at the workshop are available at <http://twaweza.org/go/sauti-tanESCO> and <http://www.slideshare.net/IIEDslides/better-power-improving-customer-information-and-feedback-mechanisms-in-the-electricity-sector-in-tanzania>

A selection of survey highlights include:

Grid connected customers

- 27% of respondents had a TANESCO grid connection of which nearly a quarter also have either a solar home system or solar portable light.
- Despite low connection numbers, when it becomes possible to connect, most people were happy with the connection process itself.
- Power cuts are happening frequently (42% reporting several times a month and 20% everyday). Perceptions are that these are often unplanned cuts, either indicating that this is the case or that customers are neither receiving nor are they aware of information that cuts are going to happen.
- Perceived lack of information on planned cuts - 73% of respondents don't think there is enough information on planned power cuts.
- Radio announcements and loudspeaker announcements from cars in local areas are the most common sources for finding out about planned power cuts.
- Perceptions are that planned power cuts are lasting longer than announced.
- There is an appetite for more community-TANESCO agreement on timing of power cuts.

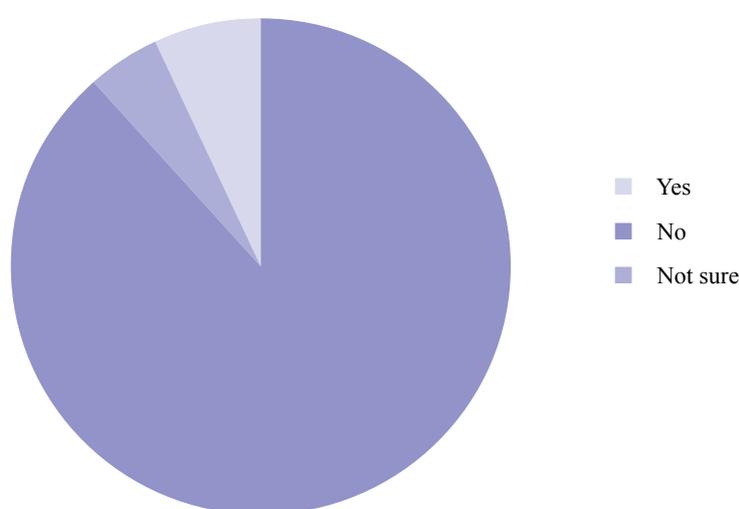
Figure 1: Where people get information on the planned power cuts



Off-grid solar products

- Solar product knowledge is very varied - 9 out of 10 product owners agree they received enough information on their solar product at point of purchase. However, taking all off-grid users as a group, the knowledge of difference between good and sub-standard products is hazy.
- People think that warranties are important – but many solar customers unaware if their product has a warranty. 58% of people think that with a warranty it would be very easy to get a product fixed.
- Customers are interested in quality standards despite a drive to reduce price/quality. - half the respondents (54%) think that the government checks solar product quality before it reaches the market. The majority think a Tanzania Bureau of Standards (TBS) market on solar products would be a good indicator of product quality.

Figure 2: Knowledge of difference between good and sub-standard solar products



Interviews with sector experts and others

IIED and HIVOS interviewed a number of people working in the electricity sector about current information and feedback mechanisms that customers may engage with, and more generally as to information passed between various players in the off-grid and on-grid sectors. We also spoke to stakeholders in parallel sectors such as water and telecoms, to understand if there was any cross-learning to be shared which might help improve the customer experience within the electricity sector.

Solar products and off-grid customers

Sub-standard solar products are a major issue in Tanzania, with a wide range of mainly Chinese produced products available in the informal markets. This poses a significant risk of declining consumer trust in the solar market and creates unfair business competition for quality providers which in turn affects demand for the whole sector. The problem has been mapped for the Tanzania solar sector; for example, see the Assessment of solar photovoltaic subsector legal frameworks, regulations, and guidelines report (TAREA 2015)², and the Lighting Africa Tanzania Market intelligence report (Lighting Africa 2013)³.

² Report available from TAREA info@tarea-tz.org

³ See https://lightingafrica.org/wp-content/uploads/bsk-pdf-manager/50_Tanzania_Quantitative_Final.pdf

Customers have little understanding of what to buy. Some of the barriers to buying better quality products include: (1) a lack of widespread availability of better quality products; (2) counterfeit products imitating known brands which lower perceptions of the better products; and (3) affordability and lack of access to credit.

All these factors create downward pressure on prices and a tendency for customers to opt for 'bad' products. After-sales customer service is also an issue, particularly for solar home systems where the installation requires matching components carefully and on-going maintenance post-purchase. For solar portable lighting there is customer interest in warranties but customers know little about them. Warranties are often not provided by suppliers/retailers or are not actionable in practice.

Solutions are emerging to help with customer information and feedback mechanisms and more generally to improve accountability in the sector. These include: consumer awareness-raising programmes to help consumers identify counterfeit and substandard products; publicly available lists of qualified installers that consumers are made aware of; training of importers/distributors on quality issues that involve the Tanzanian Bureau of Standards (TBS) and the Fair Competition Commission (FCC) in the process; and self-regulation of industry actors through a TAREA-hosted committee. However it is early days, and most solutions are incomplete or need funding and scale-up.

Many government agencies are (or could be) involved in enforcing quality standards to some extent; for example, the Tanzanian Bureau of Standards the Fair Competition Commission, the Tanzanian Regulatory Authority (TRA), the Rural Energy Agency (REA), and the Energy and Water Utilities Regulatory Authority (EWURA). But despite some regulatory action, the problem remains, due to a lack of human resource capacity, no solar PV testing facilities, and staff misconduct at Port inspection.

Beyond the regulatory gaps there are other reasons why customers get poor quality products or service. For example, products are damaged during transportation, or when installed by unskilled technicians. Customers may not receive proper use and maintenance information which can also damage systems.

Sub-standard solar products in the Tanzanian market was the focus of discussions at the workshop. This issue is a significant challenge in many other sub-Saharan African countries. In Kenya there are efforts underway to tackle the issue through a voluntary standard which focuses on certification of individuals and organisations in the supply chain rather than the product itself. This is customer-facing certification, providing information to customers and using a customer feedback mechanism to report issues. It aims to complement (but not necessarily replace) controls on product quality through official regulation and enforcement (for example carrying out checks at the ports).

The idea of the voluntary standard, developed by the Kenyan Renewable Energy Association (KAREA), is to certify importers, distributors, retailers, and technicians, as well as provide a call or text based system for customers to identify reputable people in their area as well as report any issues with products or services.

The scheme is in the early stages of development and requires significant awareness-raising and trust-building with its customers. One of the current challenges is having enough registered stakeholders (such as distributors, retailers and technicians) to be able to meet customer expectations after an initial public launch and awareness-raising campaign. There also need to be sufficient incentives for the scheme's stakeholders to participate, given that membership of the scheme requires a subscription fee from each stakeholder. This presents problems during the start-up phase; until there are sufficient customers bringing their business to registered scheme members, the perception is that membership costs outweigh benefits.

Grid connected customers

Grid connected customers receive most of their information on how to get connected from TANESCO, either through the customer call centre or through the network of TANESCO offices. For power cuts, planned outages are advertised predominantly through radio and local loudspeaker announcements from cars driving around. Bigger outages are published in newspapers and TANESCO also has a series of information slots on TV and radio.

Annex 3 provides details of some of these information channels, including the information flows. For example, radio stations receive the information on planned outages up to two weeks ahead but this is usual only broadcast 24 hours before. TANESCO indicated that they find announcements immediately prior to an outage works better for customers.

TANESCO is trialling an SMS mobile-based information system to let customers know of planned outages in the area where their connection is registered. A parallel, and more established, example is the telecoms sector where text messages are used extensively by the Tanzania Telecommunications Company Ltd (TTCL) to communicate with customers before a planned outage, and to explain why unplanned outages have taken place. Clearly telecoms operators have the advantage of knowing every customer number, but energy sector operators could offer customers an opt-in subscription for information on geographic locations that they are interested in.

TANESCO also has a publically available customer charter⁴ which includes commitments to: connection within 7 working days where there is existing infrastructure; 5 day notice of a planned outage with outage period and reasons; planned outages by mutual agreement where possible for large customers; informing customers when an unplanned outage will last longer than 24 hours; logging all complaints and responding to written complaints in writing within 3 days. When talking to TANESCO, the escalation process for complaints (or finding out the status of a complaint) was unclear. However, the Sauti survey results were fairly positive when it came to customer satisfaction on how complaints were dealt with; 49% said the complaint was always effectively dealt with.

Other publically available information from TANESCO for customers includes their published key performance indicators (KPIs) as part of their corporate report. The KPIs focus more on tracking customer connections, the length of the grid network, and mega-watts capacity, than on customer satisfaction. However, TANESCO do solicit customer feedback through their local offices, particularly by using suggestion boxes and focus groups.

4 TANESCO Customer Charter (2013) is available at http://www.tanESCO.co.tz/index.php?option=com_docman&task=doc_download&gid=164&Itemid=172

3. Key issues discussed

Participants were divided into groups to discuss stakeholders in the electricity sector – those in the supply chain itself as well as others involved as part of delivering an effective service – such as regulation (EWURA), and awareness-raising (the media). The discussion was divided into off-grid (solar products) and grid connected customers – with more time available for discussing the former. Participants were provided with a simple diagram of the solar supply chain and asked to brainstorm the following questions:

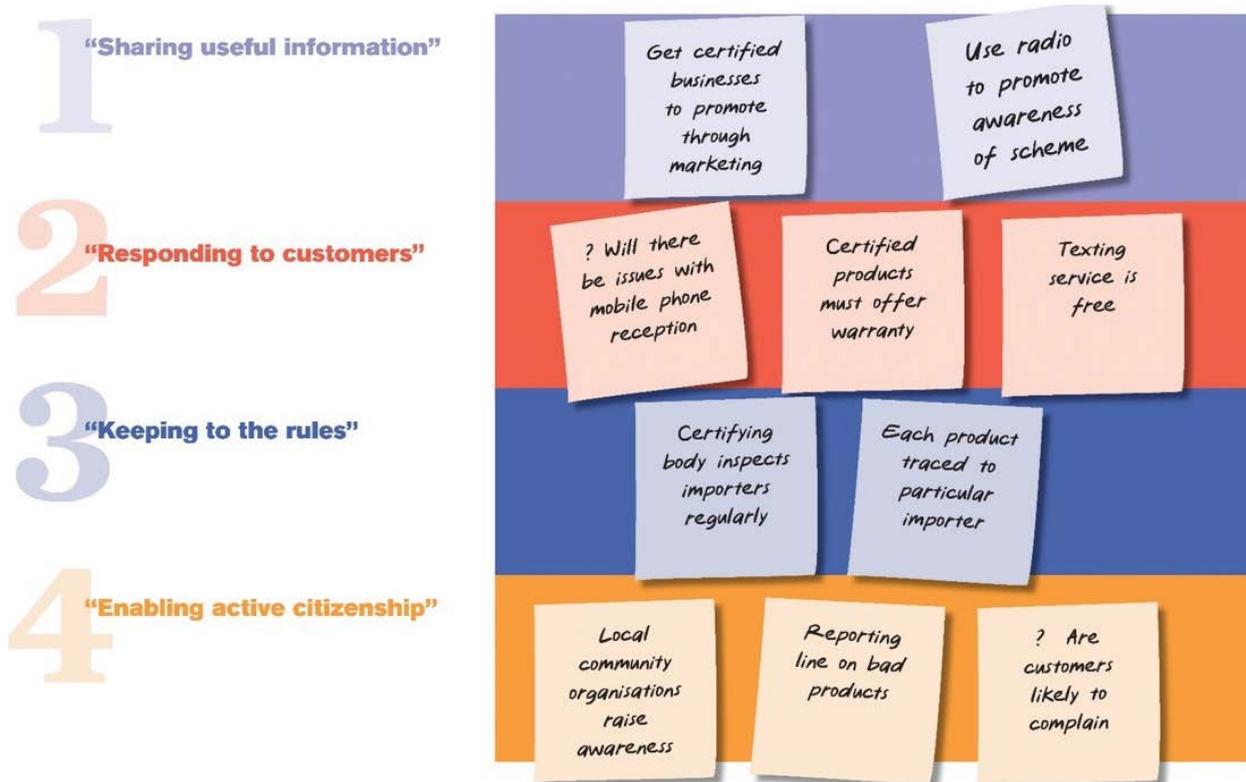
- Are there any key actors missing?
- How can customer service and product quality be improved?

Taking one idea on improving the customer experience (or a key issue that needs improving), the groups mapped this idea in further detail in terms of existing activities and how these could be improved, or re-thought. To assist with this process the groups mapped the activities across an accountability matrix with 4 separate aspects:

1. **Sharing useful information** – is information shared in a timely, relevant, and accessible way with customers, and are key decisions about energy services properly explained?
2. **Responding to customers** – are customers' needs, views, and feedback being addressed?
3. **Keeping to the rules** – are standards, targets or rules designed to improve service being enforced?
4. **Enabling active citizenship** – are citizens or customers pressing for better quality services 'from below'?

Figure 3 illustrates one example presented to participants which maps the different aspects of accountability for the idea of a solar product certification scheme using a customer SMS service to verify product quality.

Figure 3: Illustrative example - mapping different aspects of accountability for a solar product certification scheme and customer SMS service to verify product quality



Facilitating questions on thinking through the idea and populating the accountability matrix included:

- How does the idea share useful information, what types of information are being shared, why and how?
- How does it respond to customers' needs and feedback?
- If it involves standards or rules (even if voluntary), how will these be enforced?
- How does it involve customers or citizens? For example, so there is demand from 'below' to improve quality.
- What are the pros and cons of this idea?
- Resources: Who would need to be involved to make it work? What about financing?
- What more do we need to know or do to develop this further?

Findings

Solar product quality

One group focused on improving public-private partnerships – the government and business working better together, for example to share market penetration and quality information, to educate customers on products whilst providing improved provider response to customer problems, and by encouraging public hearings as well as informed media engagement on key issues. A second group focused on an existing scheme that the Renewable Energy Agency (REA) is implementing for improving solar product quality at local district level.

A number of the other groups focused on the issues of warranties and product standards to improve the customer experience of solar products. A couple of examples across the 4 categories are shown below.

Table 1 – Group work example of solar product warranties and certification

Sharing Useful Information	Responding to customers	Keeping to the rules	Enabling active citizenship
<ul style="list-style-type: none"> • Local radio awareness raising of product quality and warranty benefits • Don't set expectations before you can deliver. • Raise awareness at trade fairs • Capacity building for technicians, retailers, distributes on warranty and certification scheme • Promote existing guidelines, re-engage the government on the guidelines to improve them • The regulator (EWURA) to operate and provide usable/ useful information on the certificate scheme 	<ul style="list-style-type: none"> • Actively monitor user perceptions on the value of a warranty (expect to see increasing over time) • Engage with consumer associations 	<ul style="list-style-type: none"> • No warranty without certified technician, suppliers, and retailers • Ensure subsidies such as exemption form import tax apply only to certified products. • Value share of any subsidiary in the supply chains • Customer feedback on rule breaches e.g. through hotline 	<ul style="list-style-type: none"> • Encourage independent activity in consumer associations, • High profile endorsements to encourage citizen engagement and increased demand for certification • Facilitate independent customer reviews of products and services • advocacy by demonstration: showcase systems in publically visible spaces

Grid electricity

There was a brief plenary discussion on how on-grid customer experience could be improved. TANESCO already uses radio, and newspaper to announce planned outages. They are now testing an SMS-based system to inform customers. Could this system be iteratively improved by working with customers, possibly using an assistive tool like the accountability matrix? For example, customer perceptions of 'fairness' in power cuts is that certain areas receive more reliable power than others. A historical record of outages in an accessible form available to customers might be one information channel and feedback mechanisms to help with this. The mobile phone app demonstrated at the workshop had potential for this type of functionality.

Similarly it was noted that the media are not very well informed on issues to do with power cuts, or plans to improve quality of service. How could this be improved? How can TANESCO call centres be improved so that the appropriate skills are in place to respond to the types of information requests customers have?

The on-grid customer experience discussion ran out of time, and there was no representative from TANESCO present to deal with any immediate queries (TANESCO was invited to the workshop, and was interviewed as part of the workshop inputs).

More generally the organisers observed that the accountability matrix was a useful way of broadening the workshop discussion from electricity sector customers passively receiving information as 'information-push', such as through the radio, to include ways to engage the customer more interactively, to solicit feedback, and to increase trust in systems like warranties and certification. Seeing gaps in the matrix encouraged discussion in the other areas, as well as invited participants to challenge some of the existing information channels available to customers.

Next steps

This half-day workshop aimed to foster dialogue on why information channels, accountability and customer feedback are relevant to the electricity sector, and to tease out some of the aspects that customers need better information about to improve their perceptions of service quality.

The workshop also aimed to bring a diverse range of attendees together - across grid and off-grid experts, public and private sector, and more generalist audience who represented consumer interests such as a gender expert. This was somewhat of an experiment, with the intention of bringing together the 'less usual' suspects to help bring different perspectives to the discussion and create more holistic solutions.

In this respect, IIED and Hivos (as the organisers) feel the mix of participants helped to generate an interesting and useful debate. Mapping out some of the issues using tools such as the accountability matrix is a first step in beginning to identify and 'prototype' solutions through an iterative series of activities which combine dialogue, research, and action.

Creating these types of shared spaces for problem-solving in the Tanzanian energy sector is something that IIED and Hivos, working with others, are doing on as part of the Energy Change Lab (see <http://www.energychangelab.org/>). The Lab provides a space that aims to spark breakthroughs in Tanzania's energy transition, focused on energy systems which are more people-centred and green. We want to enable a future generation of change-makers and initiatives that enhance energy accountability and customer service, promote decentralized energy access, spur job creation and support a thriving domestic-led, alternative energy sector.

'Better Power' is far greater than 'more' power on the national grid, and the workshop has demonstrated a number of ways in which the customer experience of service quality and fairness can be improved. These include better exchange of information with the customer, improving customer feedback, and building trust through the enforcement of rules.

IIED and Hivos will be following up on a number of the ideas that have come out of the workshop, and invite the workshop participants and other interested parties to continue the discussion with us.

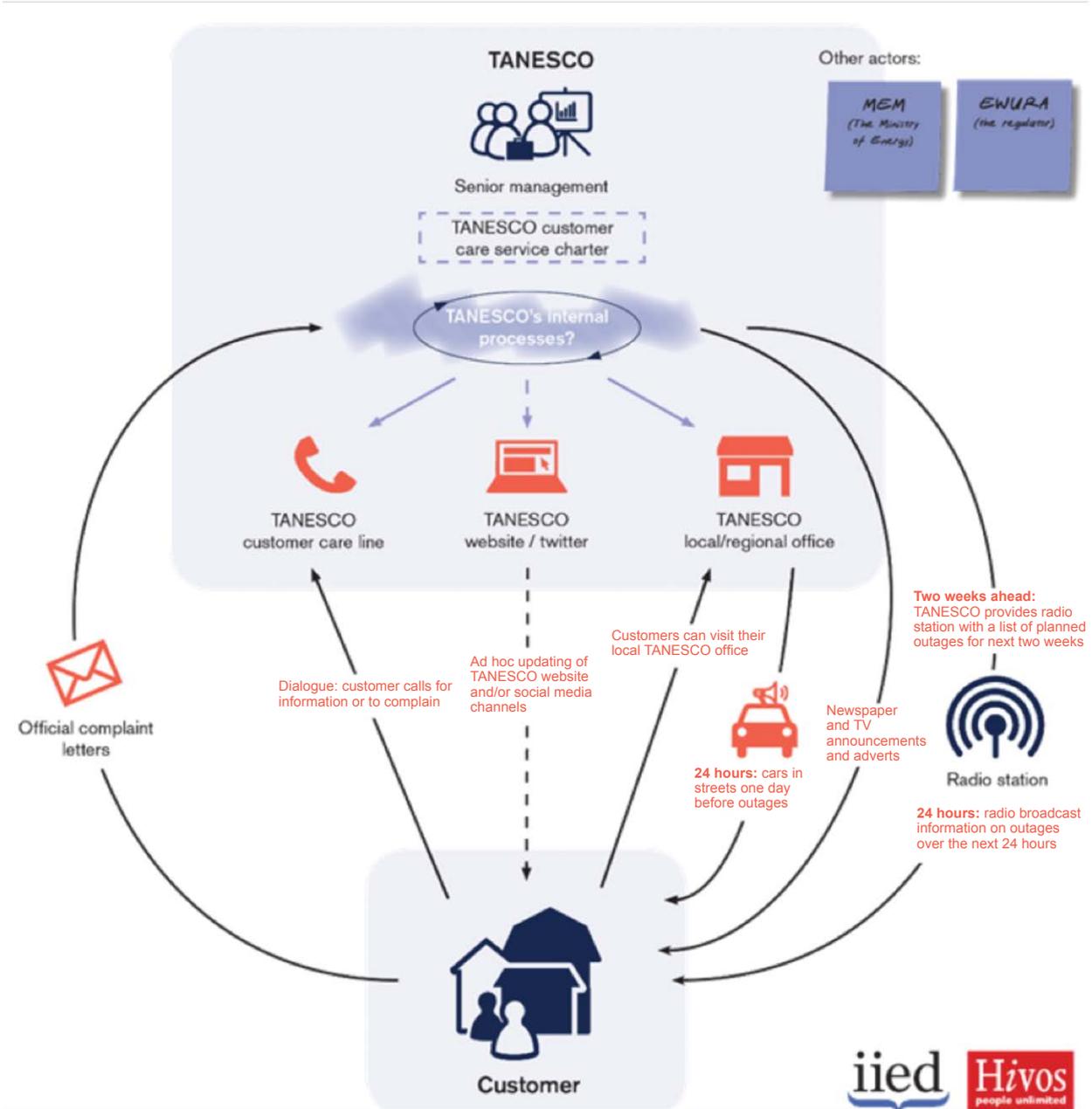
Annex 1: Workshop Agenda

- 8.30: **Coffee / Registration**
- 9.00-9.15: **Introductions and Purpose of the workshop**
Remko Berkhout, HIVOS
Sarah Best, Senior Researcher, IIED
- 9.15-10.30: **Session One: Setting the scene: Research Findings and Tanzanian Innovations**
 Information and feedback mechanisms in Tanzania electricity sector: key issues in the grid and off-grid sectors - *Ben Garside, Senior Researcher, IIED*
 Sauti Survey Results on Citizen Perceptions on Electricity Services: introduction of results - *Nellin Njovu, Twaweza*
 Short Q&A
 Prototype 1 in the grid sector: mobile app for communicating blackouts – *Maisam Pyarali, Buni Hub/Energy Safari*
 Prototype 2 in the off-grid sector: customer awareness-raising campaign by the solar providers – *Godwin Msigwa, Chairman, TAREA Advisory Board & Sun Energy Europe*
 Short Q&A
- 10.30-10.45 **Coffee break**
- 10.45-12.00 **Session Two: A closer look at improving information and feedback mechanisms for off-grid: opportunities to improve the customer experience of solar products**
 This session is a small group exercise to examine the gaps in known information and feedback channels in the off-grid grid sector and discuss opportunities and mechanisms to strengthen these.
 Plenary discussion
- 12.00-1.00 **Session Three: A closer look at improving information and feedback mechanisms for grid customers**
 This session is a small group exercise to examine the gaps in known information and feedback channels in the grid sector and discuss opportunities and mechanisms to strengthen these.
 Plenary discussion
- 1.00-1.15 **Next steps and close**
- 1.15-2.00 **Lunch and informal discussion**

Annex 2: Workshop participant list

First Name	Last Name	Organisation
Andrew	Barson	ARTI
Remko	Berkhout	Hivos
Sarah	Best	IIED
Monica	Blaalid	Norwegian Embassy
Deus	Bugaywa	Raia Mwema
Ben	Garside	IIED
Wenny	Ho	Hivos
Sana	Jaffer	Twaweza
Leanne	Jones	DFID Tanzania
Ng'anzi	Kiboko	Ewura
Zeph	Kivungi	Hivos
James	L'Ngeleja	NEMC
Cassain	Lushinge	TZ Energy Lab
Ludger	Madodi	The Citizen
Prosper	Magali	ENSOL
Grace	Mathew	Rural Energy Agency
Eco	Matser	Hivos
Mikael	Melin	EC
Simon	Mowole	IIED
Godwin	Msigwa	Tarea
Jumanne	Mtambalike	BUNI HUB
Jacqueline	Mwakangale	NEMC
Pete	Nettleto	Rise
Gisela	Ngoo	Ngsen
Nellin	Njovu	Twaweza
Maisam	Pyarali	Independent
Josh	Sebastian	SNV Tanzania
Ernest	Sungura	TMF
Dennis	Tessien	ARTI
Steve	Thorne	INDE

Annex 3: Map of national grid customer information channels when there is a power cut



IIED, HIVOS and Twaweza hosted an interactive workshop on information channels and feedback mechanisms for electricity services in Tanzania. This workshop took place on 8th December 2015 in Dar Es Salaam, and was part of the Tanzanian Energy Change Lab initiative co-founded by IIED and Hivos. See <http://www.energychangelab.org/>



Event
Materials

Energy

Keywords:
energy access



International Institute for Environment and Development
80-86 Gray's Inn Road, London WC1X 8NH, UK
Tel: +44 (0)20 3463 7399
Fax: +44 (0)20 3514 9055
email: info@iied.org
www.iied.org

Funded by:



Funding for this research comes from UK aid from Department for International Development. However, the views expressed do not necessarily reflect the views of the UK government.