

Kenya – Off-grid Solar Access Project Community Facilities Consultation

Increasing access to energy services in the underserved counties of Kenya



Agenda

- Introductory Remarks
- Project Overview
- Component Design and Implementation Arrangements
- Open Discussion

Power Sector in Kenya: Goals, Achievements and Challenges



Transform Kenya into a newly industrializing, middle-income country providing a high quality of life to all its citizens.

Access to competitively-priced, reliable, quality, safe, and sustainable energy is essential for achievement of the vision.

- GoK has set a target of universal electrification by 2020
- Last Mile Connectivity Program transformed electricity access (>1 million new customers per year)
- Electrification of community facilities is a strategic priority for the Government of Kenya (GoK) evidenced by recent large scale program to provide solar electrification to primary schools.
- **Standalone solar systems and mini-grids are a cost-effective electrification solution for households and community facilities in the dispersed areas**

K-OSAP: Project Context

Objectives And Scope

To increase access to energy services in 14 underserved counties of Kenya

- \$155 million allocation with FY17 delivery
- Targets Households, Communities, Water pumping
- Targets Capacity Building

K-OSAP will target 14 counties defined as “marginalized areas” by the CRA

Implementation of National Electrification Strategy

Investments identified by Geospatial Plan

Components and Implementation

K-OSAP components

1. Mini-grids
2. Standalone home systems for households
3. Standalone home systems for community facilities
4. Solar Water Pumping for drinking water
5. Technical Assistance (County Capacity Building, Consumer Awareness, Cooking Solutions, Strategic Planning and Program Management Unit)

K-OSAP Implementation arrangements

- MoEP, REA, KPLC and WSTF will be implementing agencies at the national level
- County Government Representatives will be part of steering and technical working group set up to oversee project design and implementation
- Project Implementation Team within MoEP

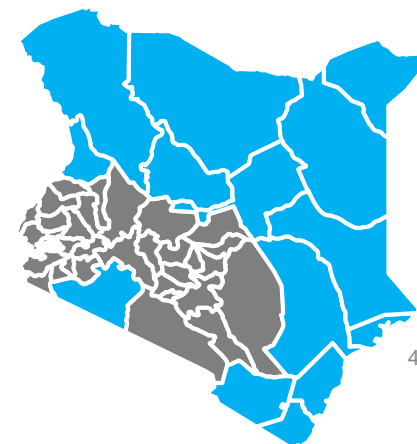
Allocation

Allocation

• Mini-grids	\$40m
• Households	\$30m
• Community Facilities	\$30m
• Water Pumping	\$30m
• Technical Assistance	\$15m
• Carbon Finance	\$5m

	\$155m

Geographic focus



Community facilities electrification: Goal and Scope

Goal

Electrify public facilities in reliable, affordable and sustainable manner through off-grid solar off-grid solutions

Scope

Project to provide electricity services to:

- **Public health facilities (existing and upcoming)**
 - Level 2 facilities (Dispensaries)
 - Level 3 facilities (Health Centers)
- **Public Education facilities (existing and upcoming)**
 - Secondary schools
 - Technical training institutes
- **Administrative offices (existing and upcoming)**
 - Assistant County Commissioner offices

Other structures could be added in the future

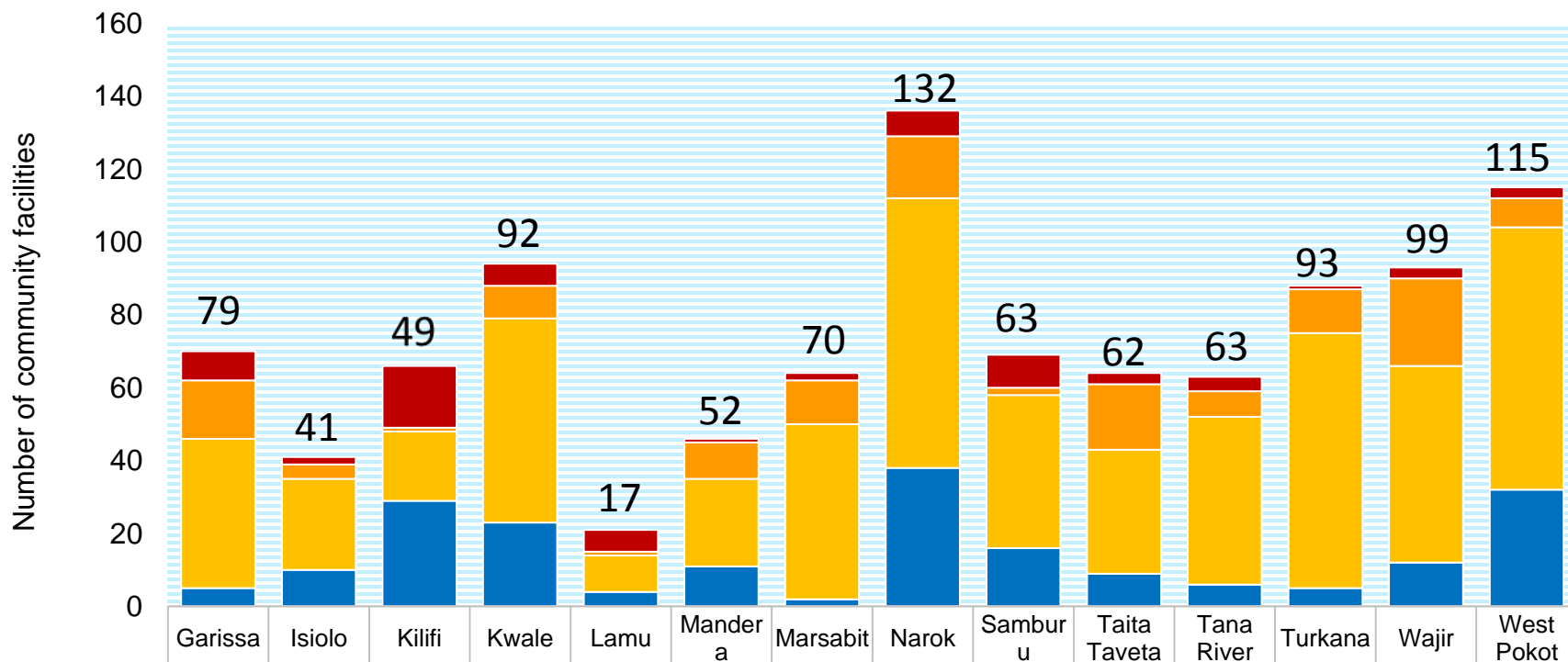
Coverage

Garissa, Isiolo, Kilifi, Kwale, Lamu, Mandera, Marsabit, Narok, Samburu, Taita Taveta, Tana River, Turkana, Wajir, West Pokot

Community facilities: Un-electrified facilities

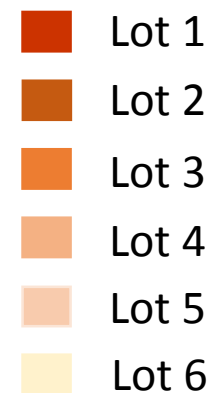
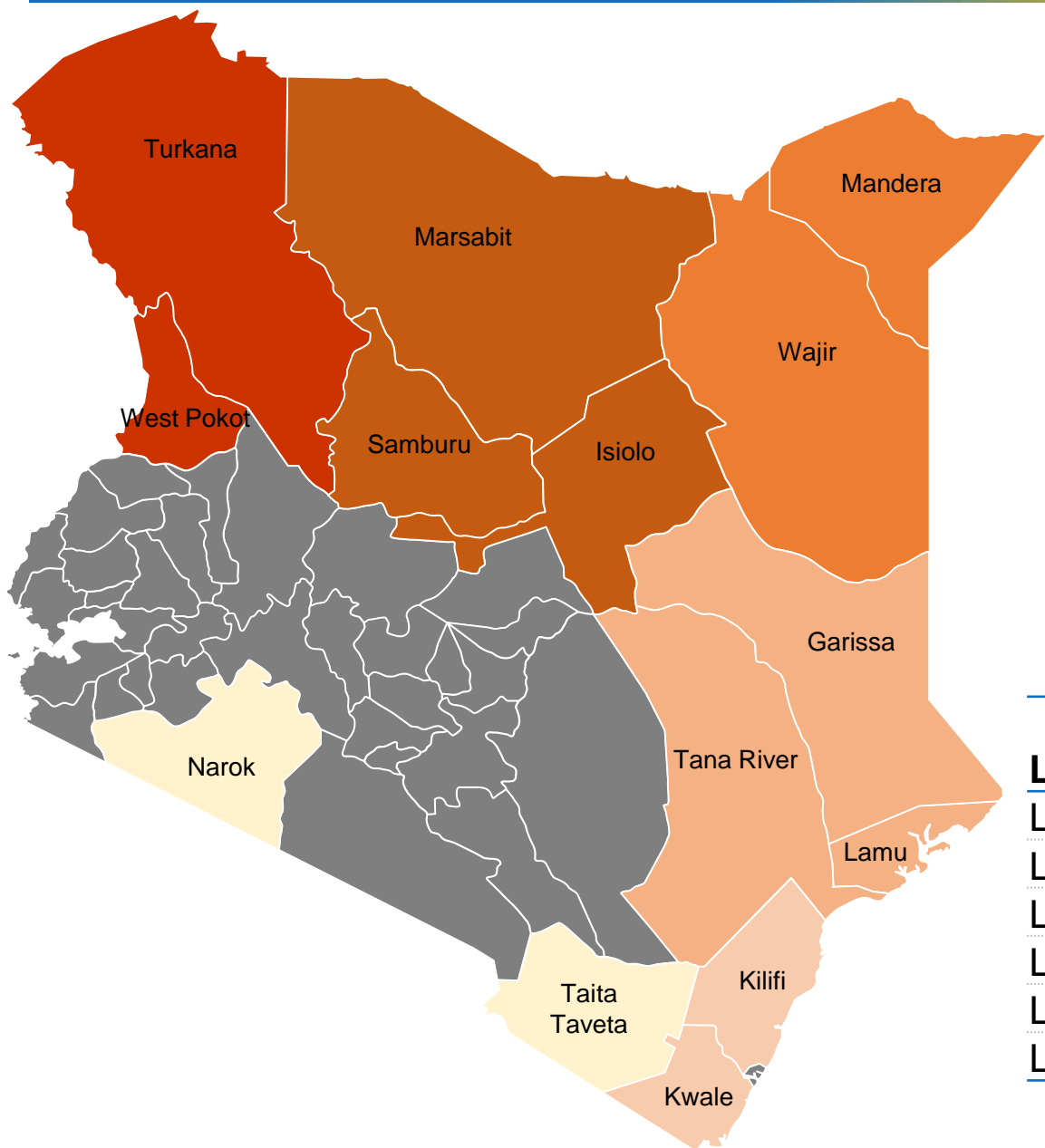
Number of un-electrified community facilities

- **HEALTH:** 615 Level 2 (Dispensaries) and 141 Level 3 (Health centers)
- **EDUCATION:** 202 Secondary schools
- **ADMINISTRATIVE OFFICES:** 70-100 ACC offices



	Garissa	Isiolo	Kilifi	Kwale	Lamu	Mandera	Marsabit	Narok	Samburu	Taita Taveta	Tana River	Turkana	Wajir	West Pokot
■ ACC offices	8	2	17	6	6	1	2	7	9	3	4	1	3	3
■ Health Centers (Level 3)	16	4	1	9	1	10	12	17	2	18	7	12	24	8
■ Dispensaries (Level 2)	41	25	19	56	10	24	48	74	42	34	46	70	54	72
■ Secondary Schools	5	10	29	23	4	11	2	38	16	9	6	5	12	32

Community Facilities: Indicative* procurement lots



Lot	Number of un-electrified facilities
Lot 1	208
Lot 2	174
Lot 3	151
Lot 4	161
Lot 5	141
Lot 6	194

Community Facilities: Electrification Approach

Overall approach

- Project area to be split into multiple geographic clusters
- Single contractor for supply, installation of SHS and provision of maintenance services over a period of 10-15 years, competitively selected for each cluster
- Selection based on lowest NPV of total supply, install, and maintenance costs over the period of the contract

Contractor responsibilities

- Supply and installation of SHS in the cluster under a 10-15 year contract with KPLC
- Provision of maintenance services of SHS in the cluster under a 10-15 contract with KPLC
- Facilities to be KPLC customers (Contractors not being retailers)
- Contractor is accountable KPLC for the performance of the SHS. KPLC is responsible for quality of electricity services to facilities

Terms of payment to contractor

- WB financing under KOSAP to cover supply and installation costs
- KPLC to pay for fees under the maintenance contract with tariff revenues (costs of maintenance contracts passes through into tariff revenues by ERC) recognized by ERC
- Payments for supply and installation and for maintenance services to be made upon verification of compliance with contract conditions

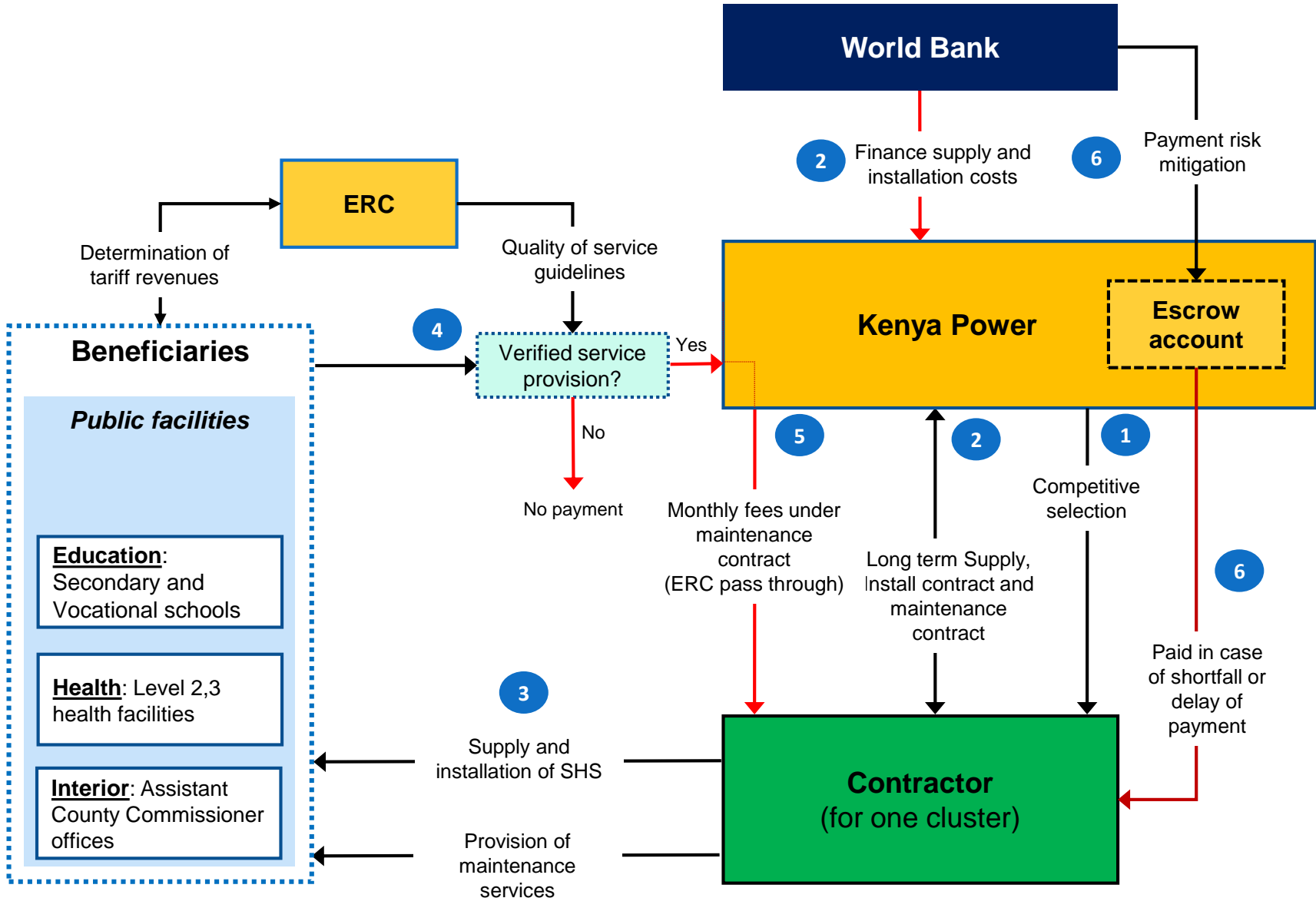
Risks and Mitigation

- Supply and installation works are financed by the WB
- Risk of payments by KPLC under the maintenance contract mitigated through funds set aside (amount equivalent to 6-12 monthly fees)
- Performance security for both supply and installation and maintenance contracts to cover situations of non-compliance by the contractor

Carbon Finance

- Contractors entitled to receive additional revenues through carbon credits upon verification by ERC of outstanding levels of quality of service

Community facilities: Implementation Arrangements



Additional Discussion

Geographic lots

- What are your views on the geographic clustering?
- Are there any geographic region/lots that you would not bid for and why?

Selection process

- Do you have any comments on the selection process for the contractor?
- Are you comfortable with the contract period and payment mechanism?
- Would you prefer to have a single lot with the mini grids?

Sizing of systems

- What do you think an ideal size of system should be for 1) Level 2 Health Center (Dispensary), 2) Level 3 health facility (Health centers), 3) Secondary schools and 4) ACC offices

Risk mitigation

- Do you see any risks that need mitigation?

K-OSAP Community facilities – Contact info

Ministry of Energy and Petroleum

- Eng. Issac Kiva (Director – Renewable Energy)
 - isaac_kiva@yahoo.com
- Jacob Chepkwony (Engineer - Directorate of Renewable Energy)
 - jkckios@yahoo.com

World Bank

- Sudeshna Banerjee (Team Leader and Country focal point)
 - sgbanerjee@worldbank.org
- Patrick Balla (Team leader)
 - pballa@worldbank.org
- Pedro Antmann (Community facilities focal point)
 - pantmann@worldbank.org
- Arsh Sharma (Community facilities focal point)
 - asharma15@worldbank.org

- ✓ Please fill out the attendance sheet and leave behind your business card
- ✓ Please take and fill out the procurement form (and send electronically)

THANK YOU

Indicative sizing

Type of Community		Average capacity of stand-alone systems (W)
Education facilities	Secondary schools	800
	Vocational training + Others	1,000
Health facilities	Level 1	500
	Level 2	1,200
	Level 3	3,600
	Level 4	6,000
	Level 5	10,000
Ministry of Interior offices	ACC Offices	3,000