



## Kenya: Off-grid Solar Access Project for Underserved Counties (P160009)

AFRICA EAST | Kenya | Energy & Extractives Global Practice |  
IBRD/IDA | Investment Project Financing | FY 2018 | Seq No: 8 | ARCHIVED on 28-Jun-2021 | ISR47150 |

Implementing Agencies: Kenya Power and Lighting Company (KPLC), Rural Electrification and Renewable Energy Corporation, Ministry of Energy and Petroleum, The National Treasury

**Key Dates****Key Project Dates**

Bank Approval Date: 26-Jul-2017

Effectiveness Date: 08-Mar-2018

Planned Mid Term Review Date: 09-Jul-2021

Actual Mid-Term Review Date:

Original Closing Date: 30-Jun-2023

Revised Closing Date: 30-Jun-2023

**Project Development Objectives**

Project Development Objective (from Project Appraisal Document)

The Project Development Objective is to increase access to modern energy services in underserved counties of Kenya

Has the Project Development Objective been changed since Board Approval of the Project Objective?

No

**Components Table**

Name

Component 1: Mini-grids for Community Facilities, Enterprises, and Households:(Cost \$40.00 M)

Component 2: Stand-alone Solar Systems and Clean Cooking Solutions for Households:(Cost \$48.00 M)

Component 3: Stand-alone Solar Systems and Solar Water Pumps for Community Facilities:(Cost \$40.00 M)

Component 4: Implementation Support and Capacity Building:(Cost \$22.00 M)

**Overall Ratings**

| Name                                 | Previous Rating                                  | Current Rating                                   |
|--------------------------------------|--|--|
| Progress towards achievement of PDO  | <input type="checkbox"/> Moderately Satisfactory | <input type="checkbox"/> Moderately Satisfactory |
| Overall Implementation Progress (IP) | <input type="checkbox"/> Moderately Satisfactory | <input type="checkbox"/> Moderately Satisfactory |
| Overall Risk Rating                  | <input type="checkbox"/> Substantial             | <input type="checkbox"/> Substantial             |

**Implementation Status and Key Decisions**

The project is on track to achieve its project development objective of increasing access to modern energy services in the underserved counties in Kenya. There is noticeable progress on each component, although the implementation has been somewhat delayed and impacted by the COVID-19 pandemic.

**Risks****Systematic Operations Risk-rating Tool**

| Risk Category  | Rating at Approval                   | Previous Rating                      | Current Rating                       |
|--|--------------------------------------|--------------------------------------|--------------------------------------|
| Political and Governance                                     | <input type="checkbox"/> Substantial | <input type="checkbox"/> Substantial | <input type="checkbox"/> Substantial |
| Macroeconomic  | <input type="checkbox"/> Moderate    | <input type="checkbox"/> Substantial | <input type="checkbox"/> Substantial |
| Sector Strategies and Policies                               | <input type="checkbox"/> Moderate    | <input type="checkbox"/> Moderate    | <input type="checkbox"/> Substantial |
| Technical Design of Project or Program                       | <input type="checkbox"/> Substantial | <input type="checkbox"/> Substantial | <input type="checkbox"/> Substantial |
| Institutional Capacity for Implementation and Sustainability | <input type="checkbox"/> Substantial | <input type="checkbox"/> Substantial | <input type="checkbox"/> Substantial |
| Fiduciary  | <input type="checkbox"/> Substantial | <input type="checkbox"/> Substantial | <input type="checkbox"/> Substantial |
| Environment and Social                                       | <input type="checkbox"/> Moderate    | <input type="checkbox"/> Moderate    | <input type="checkbox"/> Moderate    |
| Stakeholders   | <input type="checkbox"/> Substantial | <input type="checkbox"/> Substantial | <input type="checkbox"/> Substantial |
| Other  | <input type="checkbox"/> Moderate    | <input type="checkbox"/> Moderate    | <input type="checkbox"/> Substantial |
| Overall  | <input type="checkbox"/> Substantial | <input type="checkbox"/> Substantial | <input type="checkbox"/> Substantial |

**Results****PDO Indicators by Objectives / Outcomes**

| People provided with new or improved electricity service (Corporate Results Indicator)                    |   |                   |                  |              |
|---|---|-------------------|------------------|--------------|
| ▶ People provided with new or improved electricity service (Corporate Results Indicator) (Number, Custom) |   |                   |                  |              |
|   | Baseline  | Actual (Previous) | Actual (Current) | End Target   |
| Value   | 0.00  | 163,805.00        | 252,220.00       | 1,272,525.00 |
| Date  | 08-Feb-2017   | 31-Dec-2020       | 30-Apr-2021      | 28-Dec-2023  |
| Comments:   | The indicator measures the number of people that have received new or improved electricity service through KOSAP. The indicator includes direct access to electricity, which is measured as the number of people that benefited from off grid household connections via mini-grids or standalone solar systems. The number of people indicated are derived from standalone solar systems under the RBF. |                   |                  |              |
| ▶ Households provided with access to electricity by mini-grids (Number, Custom)                           |   |                   |                  |              |
|   | Baseline  | Actual (Previous) | Actual (Current) | End Target   |
| Value   | 0.00  | 0.00              | 0.00             | 20,750.00    |
| Date  | 26-Jul-2017   | 31-Dec-2020       | 30-Apr-2021      | 30-Jun-2023  |
| Comments:   | Number of households provided with access to mini-grid connection. Given that minigrids are yet to be constructed, the number of households connected remain zero.  |                   |                  |              |



| Community facilities provided with new or improved electricity service                    |  |                   |                  |             |
|---|--|-------------------|------------------|-------------|
| ► Community facilities provided with new or improved electricity service (Number, Custom) |  |                   |                  |             |
|   | Baseline   | Actual (Previous) | Actual (Current) | End Target  |
| Value   | 0.00   | 0.00              | 0.00             | 1,097.00    |
| Date  | 18-Apr-2017  | 31-Dec-2020       | 30-Apr-2021      | 28-Dec-2023 |
| Comments:   | The indicator measures the number of community facilities (schools, health facilities, administrative offices) that have received new or improved electricity service through direct connections to mini-grids or stand-alone solar systems as a result of KOSAP. The bidding process for about 473 public facilities will be launched in July 2021. |                   |                  |             |

| Renewable energy generation capacity (other than hydropower) constructed under the project (MW) (Cor   |   |                   |                  |             |
|--|---|-------------------|------------------|-------------|
| ► Renewable energy generation capacity (other than hydropower) constructed under the project (MW) (Corporate Results Indicator) (Megawatt, Custom) |   |                   |                  |             |
|  | Baseline  | Actual (Previous) | Actual (Current) | End Target  |
| Value  | 0.00  | 0.00              | 1.56             | 9.60        |
| Date   | 15-Feb-2017   | 31-Dec-2020       | 30-Apr-2021      | 28-Dec-2023 |
| Comments:  | The indicator measures in megawatts (MW) the generation capacity of renewable energy facilities (including mini-grids and stand-alone systems) constructed through KOSAP. This will be measured as the sum of (1) Renewable energy generation capacity of mini-grids constructed under the project (MW) and (2) Renewable energy generation capacity of stand-alone systems constructed under the project (MW). The generation capacity (MW) indicated in the current progress has been derived from standalone solar system under the RBF. |                   |                  |             |

### Intermediate Results Indicators by Components

| Component 2: Stand-alone Solar Systems and Clean Cooking Solutions for Households  |             |                   |                  |             |
|--|-------------|-------------------|------------------|-------------|
| ► Households provided with new electricity connections by stand-alone systems (Number, Custom)   |             |                   |                  |             |
|  | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
| Value  | 0.00        | 32,761.00         | 252,220.00       | 250,000.00  |
| Date   | 06-Dec-2016 | 31-Dec-2020       | 30-Apr-2021      | 28-Dec-2023 |
| <input type="checkbox"/> Households provided with new electricity connections by stand-alone systems, of which headed by women (%) (Percentage, Custom Supplement) |             |                   |                  |             |
|  | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
| Value  | 0.00        | 50.00             | 33.00            | 20.00       |
| ► Volume of debt channeled to private solar companies (USD) (Amount(USD), Custom)  |             |                   |                  |             |



|  | Baseline    | Actual (Previous) | Actual (Current) | End Target    |
|--|-------------|-------------------|------------------|---------------|
| Value  | 0.00        | 500,000.00        | 500,000.00       | 30,000,000.00 |
| Date   | 06-Dec-2016 | 31-Dec-2020       | 30-Apr-2021      | 28-Dec-2023   |
| <b>► Renewable energy generation capacity of stand-alone systems constructed under the project (MW) (Megawatt, Custom)</b> |             |                   |                  |               |
|  | Baseline    | Actual (Previous) | Actual (Current) | End Target    |
| Value  | 0.00        | 0.00              | 1.56             | 4.60          |
| Date   | 06-Dec-2016 | 31-Dec-2020       | 30-Apr-2021      | 28-Dec-2023   |
| <b>► Clean and efficient household stoves sold in target counties (Number, Custom)</b>                                     |             |                   |                  |               |
|  | Baseline    | Actual (Previous) | Actual (Current) | End Target    |
| Value  | 0.00        | 1,727.00          | 2,402.00         | 150,000.00    |
| Date   | 13-Dec-2016 | 31-Dec-2020       | 30-Apr-2021      | 28-Dec-2023   |
| <b>► Volume of results-based financing channeled to private solar companies (USD) (Amount(USD), Custom)</b>                |             |                   |                  |               |
|  | Baseline    | Actual (Previous) | Actual (Current) | End Target    |
| Value  | 0.00        | 273,000.00        | 393,734.00       | 12,000,000.00 |
| Date   | 06-Dec-2016 | 31-Dec-2020       | 30-Apr-2021      | 28-Dec-2023   |

#### Component 1: Mini-grids for Community Facilities, Enterprises, and Households

##### ► Renewable energy generation capacity of mini-grids constructed under the project (MW) (Megawatt, Custom)

|       | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
|-------|-------------|-------------------|------------------|-------------|
| Value | 0.00        | 0.00              | 0.00             | 5.00        |
| Date  | 06-Dec-2016 | 31-Dec-2020       | 30-Apr-2021      | 28-Dec-2023 |

##### ► Enterprises provided with access to electricity by mini-grids (Number, Custom)

|       | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
|-------|-------------|-------------------|------------------|-------------|
| Value | 0.00        | 0.00              | 0.00             | 6,050.00    |
| Date  | 08-Feb-2017 | 31-Dec-2020       | 30-Apr-2021      | 28-Dec-2023 |

##### □ Enterprises provided with access to electricity by mini-grids, of which headed by women (%) (Percentage, Custom Supplement)

|       | Baseline | Actual (Previous) | Actual (Current) | End Target |
|-------|----------|-------------------|------------------|------------|
| Value | 0.00     | 0.00              | 0.00             | 20.00      |



| ► Community facilities provided with access to electricity by mini-grids (Number, Custom)                                    |             |                   |                  |             |
|--|-------------|-------------------|------------------|-------------|
|  | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
| Value  | 0.00        | 0.00              | 0.00             | 200.00      |
| Date   | 08-Feb-2017 | 31-Dec-2020       | 30-Apr-2021      | 28-Dec-2023 |
| ► Households provided with access to electricity by mini-grids (Number, Custom)  |             |                   |                  |             |
|  | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
| Value  | 0.00        | 0.00              | 0.00             | 20,750.00   |
| Date   | 06-Dec-2016 | 31-Dec-2020       | 30-Apr-2021      | 28-Dec-2023 |
| □ Households provided with access to electricity by mini-grids, of which headed by women (%) (Percentage, Custom Supplement) |             |                   |                  |             |
|  | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
| Value  | 0.00        | 0.00              | 0.00             | 20.00       |

| Component 4: Implementation Support and Capacity Building  |   |                   |                  |             |
|--|---|-------------------|------------------|-------------|
| ► Citizens in the target area reached through the consumer education and citizen engagement program (%) (Percentage, Custom)                   |   |                   |                  |             |
|  | Baseline  | Actual (Previous) | Actual (Current) | End Target  |
| Value  | 0.00  | 0.00              | 0.00             | 65.00       |
| Date   | 09-Feb-2017   | 31-Dec-2020       | 30-Apr-2021      | 28-Dec-2023 |
| Comments:  | The implementation of consumer education and awareness/citizen engagement is currently ongoing and the out-reached so far will be computed by the end of the MTR. |                   |                  |             |
| ► Annual publication of feedback received from citizens reached through the consumer education and citizen engagement program (Yes/No, Custom) |   |                   |                  |             |
|  | Baseline  | Actual (Previous) | Actual (Current) | End Target  |
| Value  | No  | Yes               | Yes              | Yes         |
| Date   | 25-Apr-2017   | 31-Dec-2020       | 30-Apr-2021      | 29-Dec-2022 |

| Component 3: Stand-alone Solar Systems and Solar Water Pumps for Community Facilities              |  |                   |                  |             |
|--|--|-------------------|------------------|-------------|
| ► Community facilities provided with access to electricity by stand-alone systems (Number, Custom) |  |                   |                  |             |
|  | Baseline   | Actual (Previous) | Actual (Current) | End Target  |
| Value  | 0.00   | 0.00              | 0.00             | 897.00      |
| Date   | 12-Jun-2017  | 31-Dec-2020       | 30-Apr-2021      | 28-Dec-2023 |
| Comments:  | currently, 473 public facilities have been identified, and a further 117 solar water pumping systems are going through the bidding process |                   |                  |             |



| ► Boreholes equipped with solar pumping systems (Number, Custom)           |             |                   |                  |              |
|--|-------------|-------------------|------------------|--------------|
|  | Baseline    | Actual (Previous) | Actual (Current) | End Target   |
| Value  | 0.00        | 0.00              | 0.00             | 380.00       |
| Date   | 06-Dec-2016 | 31-Dec-2020       | 30-Apr-2021      | 28-Dec-2023  |
| ► Volume of GHG emissions reduced (tCO <sub>2</sub> ) (Metric ton, Custom) |             |                   |                  |              |
|  | Baseline    | Actual (Previous) | Actual (Current) | End Target   |
| Value  | 0.00        | 0.00              | 0.00             | 3,890,000.00 |
| Date   | 22-Mar-2017 | 31-Dec-2020       | 30-Apr-2021      | 30-Jun-2023  |

### Performance-Based Conditions

#### Data on Financial Performance

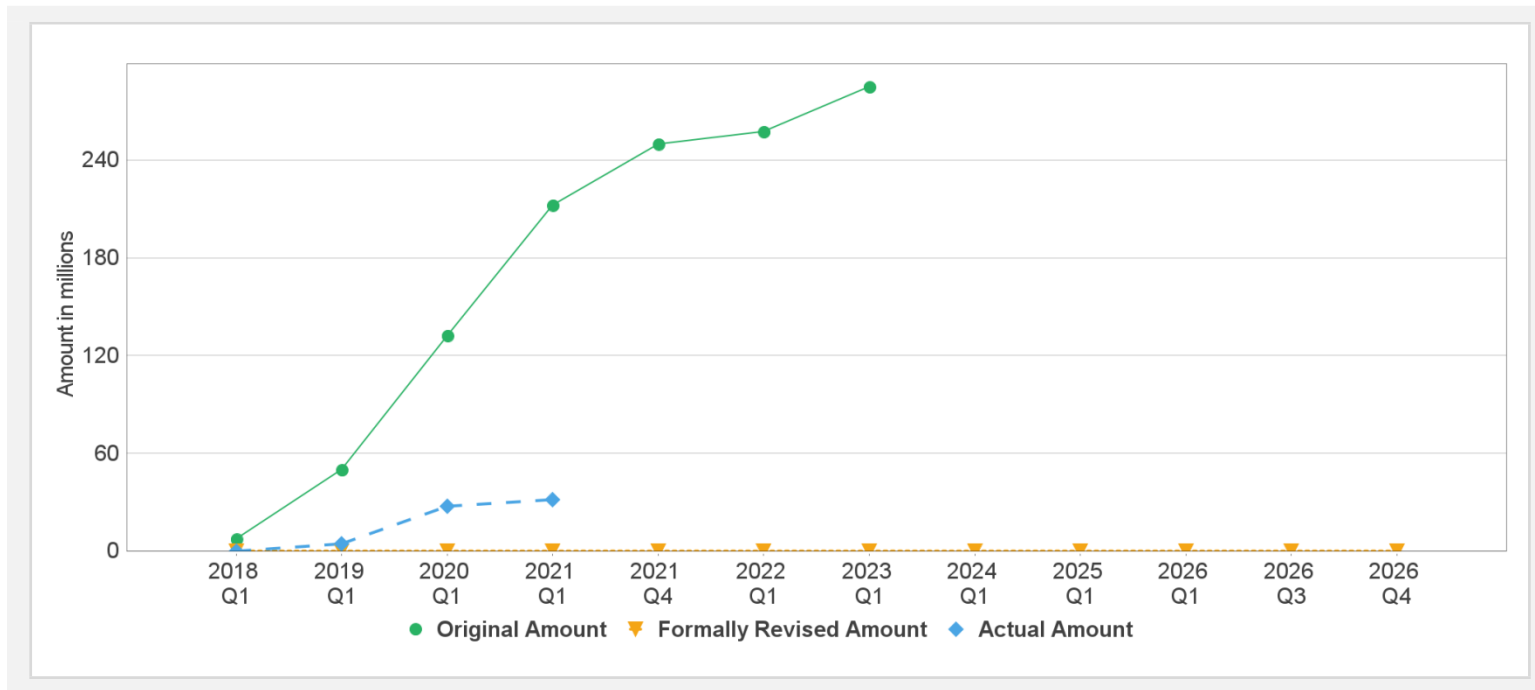
##### Disbursements (by loan)

| Project | Loan/Credit/TF | Status    | Currency | Original | Revised | Cancelled | Disbursed | Undisbursed | % Disbursed |
|---------|----------------|-----------|----------|----------|---------|-----------|-----------|-------------|-------------|
| P160009 | IDA-61350      | Effective | USD      | 150.00   | 150.00  | 0.00      | 31.94     | 126.01      | 20%         |
| P163538 | TF-A7796       | Effective | USD      | 3.97     | 3.97    | 0.00      | 0.01      | 3.96        | 0.3%        |

##### Key Dates (by loan)

| Project | Loan/Credit/TF | Status    | Approval Date | Signing Date | Effectiveness Date | Orig. Closing Date | Rev. Closing Date |
|---------|----------------|-----------|---------------|--------------|--------------------|--------------------|-------------------|
| P160009 | IDA-61350      | Effective | 26-Jul-2017   | 05-Sep-2017  | 08-Mar-2018        | 30-Jun-2023        | 30-Jun-2023       |
| P163538 | TF-A7796       | Effective | 01-Jun-2018   | 01-Aug-2018  | 01-Aug-2018        | 31-Oct-2025        | 31-Oct-2025       |

### Cumulative Disbursements



**Restructuring History**

There has been no restructuring to date.

**Related Project(s)**

P163538-Kenya Solar Lighting Program