



Electricity Network Reinforcement and Expansion Project (ENREP) (P119893)

AFRICA EAST | Ethiopia | Energy & Extractives Global Practice |
IBRD/IDA | Investment Project Financing | FY 2012 | Seq No: 17 | ARCHIVED on 18-Apr-2022 | ISR50344 |

Implementing Agencies: Development Bank of Ethiopia, Ethiopia Electric Power, Federal Democratic Republic of Ethiopia

Key Dates

Key Project Dates

Bank Approval Date: 29-May-2012

Effectiveness Date: 04-Jan-2013

Planned Mid Term Review Date: 23-Mar-2015

Actual Mid-Term Review Date: 23-Mar-2015

Original Closing Date: 31-Dec-2017

Revised Closing Date: 29-Dec-2023

Project Development Objectives

Project Development Objective (from Project Appraisal Document)

The Development Objectives of the Electricity Network Reinforcement and Expansion Project are to improve reliability of the electricity network and to increase access to electricity services in Ethiopia.

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

No

Components Table

Name

Reinforcement and Expansion of Electricity Network:(Cost \$197.00 M)

Access Scale-Up:(Cost \$154.00 M)

Market Development for Renewable Energy and Energy Efficient Products:(Cost \$59.00 M)

Modernization Support:(Cost \$68.00 M)

Overall Ratings

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

Implementation Status and Key Decisions

The project closing date for ENREP and ENREP-AF was extended in December 2021 by two years – with a revised closing date of December 31, 2023. The closing date for CiDev grant was also extended by seven months to June 30, 2022. These extensions were processed to allow additional time to complete some contracts which were delayed due to COVID-19 but are now on track for implementation.

Component 1: Reinforcement and expansion of electricity networks (US\$100 million original credit, US\$90 million AF, total US\$190 million). The transmission strengthening project (Contract H) with the scope of installing a second 230 kV circuit on the existing system is completed - but awaits remedial work to install and string five additional towers. The ongoing construction of three single circuit 230 kV lines and substations is also



progressing well, except in the case of Metu-Masha transmission line, where the finalization of safeguards documentation is awaited before start of transmission line construction. The Fincha-Shambu line has been completed, though the related communications systems are currently under implementation. The Azezo-Chilga line is currently under implementation at an advanced stage.

Component 2: Access scale up (US\$50 million original credit, US\$70 million AF, total US\$120 million). Work on all the three lots for the Six-Town Project commenced in January and February 2020, but suffered from further delays due to the prevailing conflict and the COVID pandemic. Work has now resumed and EEU has now decided to replace the activity in Adigrat with Combolcha in view of the continued security concerns in Adigrat. Earlier, the eight-town project, for the upgrading and expansion of medium voltage (MV) and low voltage (LV) distribution networks was completed. Contracts for 150,000 new connections in cities covered under the eight-town and six-town contracts are being processed.

Component 3: Market development for renewable energy and energy efficient products (US\$20 million original credit, US\$20 million AF, US\$5 million TF0A2302, total US\$45 million). The credit line is now fully subscribed, and 1,375,752 solar lanterns and solar home systems have been procured.

Component 4: Modernization support (US\$10 million original credit, US\$20 million AF, total US\$30 million). The component finances, among others, a new enterprise resource planning (ERP) system for EEU, whose implementation was completed in October 2019. The procurement of Live Line Maintenance (LLM) and Revenue Protection Program (RPP) is currently underway.

The Emission Reduction Purchase Agreement between DBE and CiDev will be amended to reflect the reduced target for carbon emission reductions from Standalone Solar Systems and Clean Cooking Solutions.

There are no major decisions pending in the context of the implementation of this project.

Risks

Systematic Operations Risk-rating Tool

| Risk Category | Rating at Approval | Previous Rating | Current Rating |
|--|--------------------|-----------------|----------------|
| Political and Governance | -- | High | Substantial |
| Macroeconomic | -- | Moderate | Moderate |
| Sector Strategies and Policies | -- | Low | Low |
| Technical Design of Project or Program | -- | Low | Low |
| Institutional Capacity for Implementation and Sustainability | -- | Moderate | Moderate |
| Fiduciary | -- | Moderate | Moderate |
| Environment and Social | -- | Substantial | Substantial |
| Stakeholders | -- | Moderate | Moderate |
| Other | -- | -- | -- |
| Overall | -- | High | Substantial |

Results

PDO Indicators by Objectives / Outcomes

| | | | | |
|---|----------|-------------------|------------------|--------------|
| Increase access to electricity services in Ethiopia | | | | |
| ► Direct project beneficiaries (Number, Custom) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 5,259,145.00 | 5,259,145.00 | 7,552,700.00 |



| | | | | |
|---|--|-------------------|------------------|--------------|
| Date | 30-Jun-2011 | 15-Jun-2021 | 18-Feb-2022 | 31-Dec-2023 |
| Comments: | This number is based on the number of households having access to modern energy services. | | | |
| ❑Female beneficiaries (Percentage, Custom Supplement) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 50.00 | 50.00 | 50.00 |
| ▶ Access: Number of HHs connected to the grid (Number, Custom) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 0.00 | 0.00 | 150,000.00 |
| Date | 30-Jun-2011 | 15-Jun-2021 | 18-Feb-2022 | 31-Dec-2023 |
| Comments: | The 150,000 connections project has not yet been launched. Offers are being evaluated. | | | |
| ▶ Access: Number of HHs with access to modern energy services (off-grid) (Number, Custom) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 1,375,752.00 | 1,375,752.00 | 1,500,000.00 |
| Date | 30-Jun-2011 | 15-Jun-2021 | 18-Feb-2022 | 31-Dec-2023 |
| Comments: | This is the actual number of solar products imported, distributed and reported by private companies. This number is expected to increase significantly in the next six months. | | | |

| Improve reliability of the electricity network | | | | |
|---|--|-------------------|------------------|-------------|
| ► Reliability: System Average Interruption Frequency Index, SAIFI, in the project areas. (Number, Custom) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 178.00 | 101.00 | 101.00 | 89.00 |
| Date | 31-Dec-2015 | 15-Jun-2021 | 15-Jun-2021 | 31-Dec-2021 |
| Comments: | This is for the system as a whole (measured by EEP). | | | |
| □ SAIFI - Project Area 1 (7 towns) (Number, Custom Breakdown) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 196.00 | 100.00 | 100.00 | 98.00 |
| Date | 31-Dec-2015 | 15-Jun-2021 | 15-Jun-2021 | 31-Dec-2021 |
| □ SAIFI - Project Area 2 (6 towns) (Number, Custom Breakdown) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |



| | | | | |
|-------|-------------|-------------|-------------|-------------|
| Value | 157.00 | 157.00 | 157.00 | 78.00 |
| Date | 31-Dec-2015 | 15-Jun-2021 | 15-Jun-2021 | 31-Dec-2021 |

Overall Comments

The results indicators will be updated with the latest data in the next ISR.

Intermediate Results Indicators by Components

| | | | | |
|--|-------------|-------------------|------------------|-------------|
| Reinforcement and Expansion of Electricity Network | | | | |
| ► Reliability: System Average Interruption Duration Index, SAIDI, in the project areas (Hours, Custom) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 258.00 | 150.00 | 150.00 | 129.00 |
| Date | 28-Jan-2016 | 15-Jun-2021 | 15-Jun-2021 | 31-Dec-2021 |
| □ Project Area 1 (7 towns) (Hours, Custom Breakdown) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 224.00 | 221.00 | 221.00 | 112.00 |
| Date | 28-Jan-2016 | 15-Jun-2021 | 15-Jun-2021 | 31-Dec-2021 |
| □ Project Area 2 (6 towns) (Hours, Custom Breakdown) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 298.00 | 298.00 | 298.00 | 149.00 |
| Date | 28-Jan-2016 | 15-Jun-2021 | 15-Jun-2021 | 31-Dec-2021 |
| ► Segments of transmission lines constructed, upgraded or rehabilitated (km) (Kilometers, Custom) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 458.00 | 458.00 | 609.00 |
| Date | 30-Jun-2011 | 15-Jun-2021 | 15-Jun-2021 | 31-Dec-2021 |
| ► Number of Substations constructed or upgraded under the project (Number, Custom) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 25.00 | 25.00 | 30.00 |
| Date | 30-Jun-2011 | 15-Jun-2021 | 15-Jun-2021 | 31-Dec-2021 |



► Time to complete EEP entity audit report (Months, Custom)

| | Baseline | Actual (Previous) | Actual (Current) | End Target |
|-------|-------------|-------------------|------------------|-------------|
| Value | 7.00 | 18.00 | 18.00 | 6.00 |
| Date | 01-Mar-2012 | 15-Jun-2021 | 15-Jun-2021 | 31-Dec-2021 |

► Number of EEP retained procurement staff (Number, Custom)

| | Baseline | Actual (Previous) | Actual (Current) | End Target |
|-------|-------------|-------------------|------------------|-------------|
| Value | 1.00 | 1.00 | 1.00 | 4.00 |
| Date | 30-Jun-2011 | 15-Jun-2021 | 15-Jun-2021 | 31-Dec-2021 |

► Number of EEP/EEU Staff Trained (Number, Custom)

| | Baseline | Actual (Previous) | Actual (Current) | End Target |
|-------|-------------|-------------------|------------------|-------------|
| Value | 0.00 | 80.00 | 80.00 | 90.00 |
| Date | 30-Jun-2011 | 15-Jun-2021 | 15-Jun-2021 | 31-Dec-2021 |

Access Scale-Up

► Total Energy Sales in the project areas (Gigawatt-hour (GWh), Custom)

| | Baseline | Actual (Previous) | Actual (Current) | End Target |
|-------|-------------|-------------------|------------------|-------------|
| Value | 0.00 | 1,564.00 | 1,564.00 | 2,240.00 |
| Date | 30-Jun-2011 | 15-Jun-2021 | 15-Jun-2021 | 31-Dec-2021 |

► Segments of distribution lines constructed, upgraded or rehabilitated (Kilometers, Custom)

| | Baseline | Actual (Previous) | Actual (Current) | End Target |
|-------|-------------|-------------------|------------------|-------------|
| Value | 0.00 | 1,260.10 | 1,260.10 | 3,338.00 |
| Date | 28-Jan-2016 | 15-Jun-2021 | 15-Jun-2021 | 31-Dec-2021 |

Market Development for Renewable Energy and Energy Efficient Products

► Number of biogas plants installed (Number, Custom)

| | Baseline | Actual (Previous) | Actual (Current) | End Target |
|-------|-------------|-------------------|------------------|-------------|
| Value | 0.00 | 8,625.00 | 8,625.00 | 10,000.00 |
| Date | 30-Jun-2011 | 15-Jun-2021 | 15-Jun-2021 | 31-Dec-2021 |

Comments: As of March 31, 2018



| | | | | |
|--|----------------------|-------------------|------------------|---------------|
| ► Number of Solar Lanterns Procured (Number, Custom) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 1,169,912.00 | 1,169,912.00 | 1,300,000.00 |
| Date | 30-Jun-2011 | 15-Jun-2021 | 15-Jun-2021 | 31-Dec-2021 |
| ► Number of Solar Home Systems Procured (Number, Custom) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 205,840.00 | 205,840.00 | 200,000.00 |
| Date | 30-Jun-2011 | 15-Jun-2021 | 15-Jun-2021 | 31-Dec-2021 |
| Comments: | As of March 31, 2018 | | | |
| ► Number of energy savings lamps imported and distributed (Number, Custom) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 245,424.00 | 806,428.00 | 806,428.00 | 500,000.00 |
| Date | 28-Jan-2016 | 15-Jun-2021 | 15-Jun-2021 | 31-Dec-2021 |
| ► Number of efficient cookstoves distributed (Number, Custom) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 138.00 | 138.00 | 500.00 |
| Date | 30-Jun-2011 | 15-Jun-2021 | 15-Jun-2021 | 31-Dec-2021 |
| ► Total amount of loans given to HHs (Amount(USD), Custom) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 12,976,526.67 | 12,976,526.67 | 11,000,000.00 |
| Date | 30-Jun-2011 | 15-Jun-2021 | 15-Jun-2021 | 31-Dec-2021 |
| ☐ Total amount of loans given to female applicants (%) (Amount(USD), Custom Breakdown) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 28.66 | 56.00 | 56.00 | 50.00 |
| Date | 28-Jan-2016 | 15-Jun-2021 | 15-Jun-2021 | 31-Dec-2021 |
| ► Number of loans given to HHs (Number, Custom) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 217,691.00 | 217,691.00 | 200,000.00 |



| Date | 30-Jun-2011 | 15-Jun-2021 | 15-Jun-2021 | 31-Dec-2021 |
|---|----------------------|-------------------|------------------|---------------|
| □ Number of loans given to female applicants (Number, Custom Breakdown) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 34.45 | 60.00 | 60.00 | 50.00 |
| Date | 29-Jan-2016 | 15-Jun-2021 | 15-Jun-2021 | 31-Dec-2021 |
| ► NPL Ratio of HH Loan Portfolio (Percentage, Custom) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 0.00 | 0.00 | 5.00 |
| Date | 30-Jun-2011 | 15-Jun-2021 | 15-Jun-2021 | 31-Dec-2021 |
| ► Number of Partner MFIs (Number, Custom) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 14.00 | 14.00 | 25.00 |
| Date | 30-Jun-2011 | 15-Jun-2021 | 15-Jun-2021 | 31-Dec-2021 |
| ► Woreda covered by credit line (Number, Custom) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 135.00 | 135.00 | 150.00 |
| Date | 30-Jun-2011 | 15-Jun-2021 | 15-Jun-2021 | 31-Dec-2021 |
| ► Total amount of loans given to PSEs (Amount(USD), Custom) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 24,228,371.39 | 24,228,371.39 | 29,000,000.00 |
| Date | 30-Jun-2011 | 15-Jun-2021 | 15-Jun-2021 | 31-Dec-2021 |
| Comments: | As of March 31, 2018 | | | |
| ► Number of loans given to PSEs (Number, Custom) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 33.00 | 33.00 | 30.00 |
| Date | 30-Jun-2011 | 15-Jun-2021 | 15-Jun-2021 | 31-Dec-2021 |
| Comments: | As of March 31, 2018 | | | |



► NPL Ratio of the PSE Loan Portfolio (Percentage, Custom)

| | Baseline | Actual (Previous) | Actual (Current) | End Target |
|-------|-------------|-------------------|------------------|-------------|
| Value | 0.00 | 8.50 | 8.50 | 5.00 |
| Date | 30-Jun-2011 | 15-Jun-2021 | 15-Jun-2021 | 31-Dec-2021 |

Modernization Support

► Number of gender informed awareness events held (Number, Custom)

| | Baseline | Actual (Previous) | Actual (Current) | End Target |
|-------|-------------|-------------------|------------------|-------------|
| Value | 0.00 | 7.00 | 7.00 | 9.00 |
| Date | 30-Jun-2011 | 15-Jun-2021 | 15-Jun-2021 | 31-Dec-2021 |

► EEP publishes annual report on citizen engagement (Yes/No, Custom)

| | Baseline | Actual (Previous) | Actual (Current) | End Target |
|-----------|---|-------------------|------------------|-------------|
| Value | No | No | No | Yes |
| Date | 28-Jan-2016 | 15-Jun-2021 | 15-Jun-2021 | 31-Dec-2021 |
| Comments: | EEU published a report on gender and citizen engagement | | | |

Performance-Based Conditions

Data on Financial Performance

Disbursements (by loan)

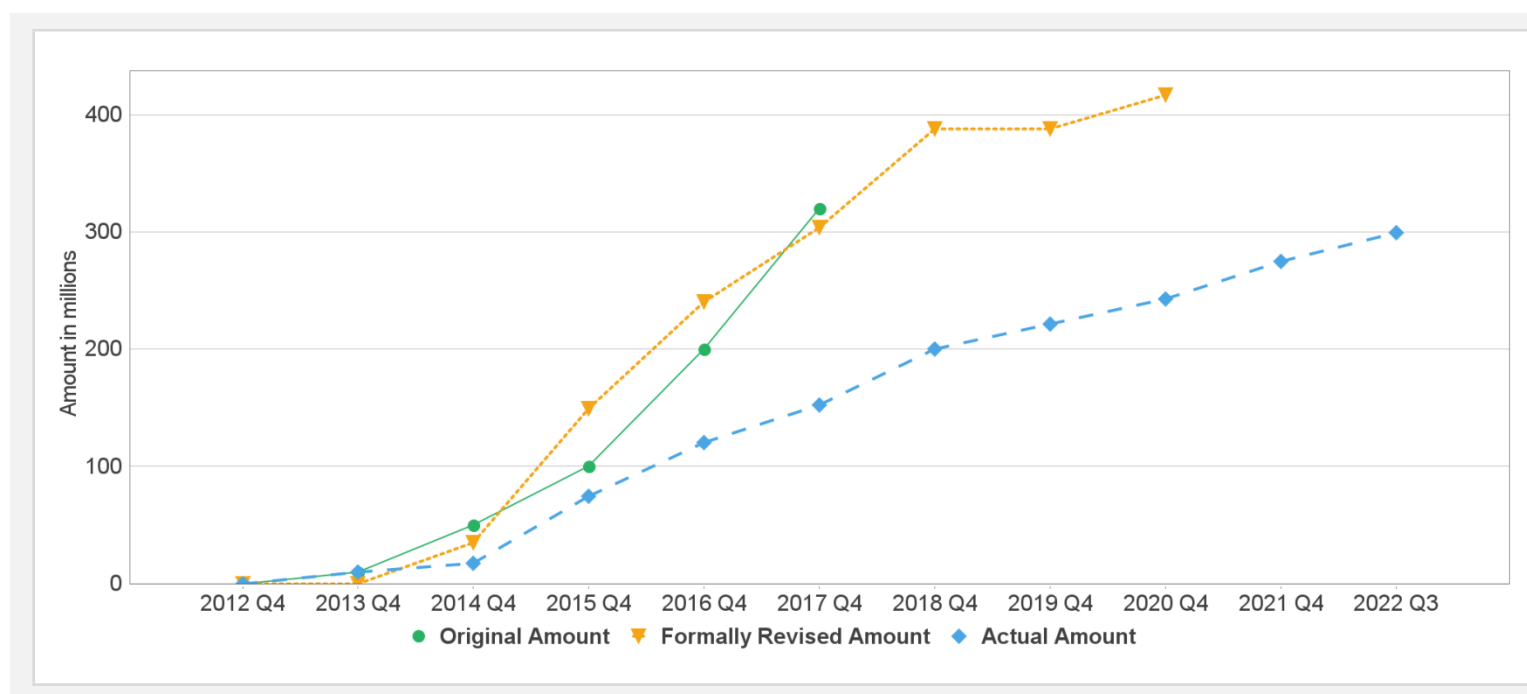
| Project | Loan/Credit/TF | Status | Currency | Original | Revised | Cancelled | Disbursed | Undisbursed | % Disbursed |
|---------|----------------|-----------|----------|----------|---------|-----------|-----------|-------------|-------------|
| P119893 | IDA-51260 | Effective | USD | 200.00 | 200.00 | 0.00 | 182.87 | 0.79 | 100% |
| P119893 | IDA-58140 | Effective | USD | 200.00 | 200.00 | 0.00 | 110.64 | 87.76 | 56% |
| P119893 | TF-A2302 | Closed | USD | 5.00 | 4.90 | 0.10 | 4.90 | 0.00 | 100% |
| P153864 | TF-A2909 | Effective | USD | 11.11 | 11.11 | 0.00 | 0.39 | 10.71 | 3.5% |
| P153425 | TF-A2910 | Effective | USD | 9.08 | 9.08 | 0.00 | 0.39 | 8.69 | 4.3% |
| P153425 | TF-A4038 | Effective | USD | 0.21 | 0.21 | 0.00 | 0.21 | 0.00 | 100% |



| | | | | | | | | | | |
|---------|----------|-----------|-----|------|------|------|------|------|---------------------------------|-----|
| P153864 | TF-A4039 | Effective | USD | 0.15 | 0.15 | 0.00 | 0.11 | 0.04 | <div style="width: 73%;"></div> | 73% |
|---------|----------|-----------|-----|------|------|------|------|------|---------------------------------|-----|

Key Dates (by loan)

| Project | Loan/Credit/TF | Status | Approval Date | Signing Date | Effectiveness Date | Orig. Closing Date | Rev. Closing Date |
|---------|----------------|-----------|---------------|--------------|--------------------|--------------------|-------------------|
| P119893 | IDA-51260 | Effective | 29-May-2012 | 12-Jun-2012 | 04-Jan-2013 | 31-Dec-2017 | 29-Dec-2023 |
| P119893 | IDA-58140 | Effective | 27-May-2016 | 15-Jun-2016 | 31-Aug-2016 | 30-Jun-2019 | 29-Dec-2023 |
| P119893 | TF-A2302 | Closed | 27-May-2016 | 15-Jun-2016 | 31-Aug-2016 | 31-Aug-2017 | 30-Apr-2019 |
| P153864 | TF-A2909 | Effective | 27-Jun-2016 | 14-Jul-2016 | 14-Jul-2016 | 31-Oct-2025 | 31-Oct-2025 |
| P153425 | TF-A2910 | Effective | 14-Jul-2016 | 14-Jul-2016 | 14-Jul-2016 | 31-Oct-2025 | 31-Oct-2025 |
| P153425 | TF-A4038 | Effective | 07-Dec-2016 | 11-Jun-2018 | 11-Jun-2018 | 31-Dec-2019 | 30-Jun-2022 |
| P153864 | TF-A4039 | Effective | 07-Dec-2016 | 11-Jun-2018 | 11-Jun-2018 | 31-Dec-2019 | 30-Jun-2022 |

Cumulative Disbursements**Restructuring History**

Level 2 Approved on 26-Aug-2014 ,Level 2 Approved on 22-Aug-2017 ,Level 2 Approved on 24-Aug-2018 ,Level 2 Approved on 20-Dec-2018 ,Level 2 Approved on 31-May-2019 ,Level 2 Approved on 17-Dec-2021

Related Project(s)



P153425-ET Clean Cooking Energy Program ,P153864-ETHIOPIA OFF~GRID RENEWABLE ENERGY PROGRAMME OF ACTIVITIES
,P155563-ENREP ADDITIONAL FINANCING
