



WAPP APL4 (Phase 1) - Côte d'Ivoire, Sierra Leone, Liberia, and Guinea Power System Re-development (P113266)

AFRICA WEST | Western Africa | Energy & Extractives Global Practice |
IBRD/IDA | Investment Project Financing | FY 2012 | Seq No: 15 | ARCHIVED on 21-Oct-2021 | ISR47241 |

Implementing Agencies: The CLSG Regional Transmission Company, WAPP Secretariat, Republic of Sierra Leone, Republic of Liberia

Key Dates**Key Project Dates**

Bank Approval Date: 31-May-2012

Effectiveness Date: 27-Dec-2012

Planned Mid Term Review Date: 31-Jan-2017

Actual Mid-Term Review Date: 02-Feb-2017

Original Closing Date: 31-Dec-2017

Revised Closing Date: 15-Nov-2022

Project Development Objectives

Project Development Objective (from Project Appraisal Document)

The project development objectives for the two sub-projects are (i) to reduce the cost of and increase the electricity supply at utility level, and to increase the export capability of Côte d'Ivoire, and (ii) to increase the technical integration of the WAPP network.

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

Yes

Board Approved Revised Project Development Objective (If project is formally restructured)

The revised PDOs for the WAPP CLSG Power Interconnection are to: (a) reduce the cost of electricity supply at the utility level for Liberia and Sierra Leone and (b) increase the amount of electricity traded among all the participating countries. The Development Objective of the WAPP TA is to increase the technical integration of the WAPP network.

Components Table

Name

Power Interconnection between Cote d'Ivoire, Liberia, Sierra Leone and Guinea:(Cost \$179.06 M)
Institutional Framework and Project Oversight:(Cost \$39.91 M)
Supply Alternatives Studies and Project Preparation Support:(Cost \$24.75 M)
Technical Assistance and Integration of WAPP Network:(Cost \$21.50 M)
Unallocated & Interest Accrued during Construction:(Cost \$12.52 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"/> Satisfactory | <input type="checkbox"/> Moderately Satisfactory |
| Overall Risk Rating | <input type="checkbox"/> Substantial | <input type="checkbox"/> High |

Implementation Status and Key Decisions

There has been major progress this year in advancing the implementation of the **CLSG Interconnection** co-financed by AfDB, the European Investment Bank, KfW and the World Bank. Construction of the line has progressed despite the COVID-19 crisis in 2020. The CLSG line from Ivory



Coast to Liberia has been commissioned and is ready to operate, as well as the section from Mano to Kenema in Sierra Leone and the section from Yekepa to Nzérékore in Guinea. The remaining sections in Sierra Leone and Guinea are expected to be operational in 2022.

Implementation of the **ITAP grants to the WAPP** is also progressing while some delays might be expected due to COVID. The contracts for (i) supply and installation of priority synchronization equipment and (ii) tuning of strategic power system stabilizers and governors are under implementation. These activities together with other regional activities (working groups on synchronization, certification of operators, dissemination of transmission tariffs methodology, harmonization of PPA/TSA) fosters an harmonized approach for all WAPP countries and foster synchronization and coordination of electricity exchanges.

Activities planned for the preparation of least cost regional and national generation in Liberia are also progressing well. The Optimization Study aiming at identifying a least cost generation plan (including imports/export through CLSG) was completed and followed with the approval of the Priority Investment Plan (PIP) at ministerial level. Proposed PIP includes development of (i) 90 MW solar development in three phases; (ii) development of 1a 50 MW hydropower scheme on St Paul River (SP2); and (iii) extension of Mount Coffee HP (+44 MW). Feasibility and Environmental, Social Impact Assessment (ESIA) studies for the PIP are proceeding well.

In addition to the studies, the grant also supports the capacity building of the WAPP Secretariat. Under this component, the WAPP hired, among others, an international Power Pool Expert, a Technical Coordinator, a Senior Procurement Specialist to strengthen the Secretariat's technical and fiduciary capacity to respond to the challenges of a rapidly expanding work program of WAPP regional projects.

Impacts

Multiphase Programmatic Approach (MPA) Status

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 |
| Macroeconomic | -- | <input type="checkbox"/> Substantial | <input type="checkbox"/> Substantial |
| Sector Strategies and Policies | -- | <input type="checkbox"/> Substantial | <input type="checkbox"/> High |
| Technical Design of Project or Program | -- | <input type="checkbox"/> Moderate | <input type="checkbox"/> Moderate |
| Institutional Capacity for Implementation and Sustainability | -- | <input type="checkbox"/> Substantial | <input type="checkbox"/> High |
| Fiduciary | -- | <input type="checkbox"/> Substantial | <input type="checkbox"/> Substantial |
| Environment and Social | -- | <input type="checkbox"/> Substantial | <input type="checkbox"/> Substantial |
| Stakeholders | -- | <input type="checkbox"/> Substantial | <input type="checkbox"/> High |
| Other | -- | <input type="checkbox"/> Substantial | <input type="checkbox"/> Substantial |
| Overall | -- | <input type="checkbox"/> Substantial | <input type="checkbox"/> High |

Results

PDO Indicators by Objectives / Outcomes

Direct Project Beneficiaries

► Direct project beneficiaries (Number, Custom)



| | Baseline | Actual (Previous) | Actual (Current) | End Target |
|---|-------------|-------------------|------------------|-------------|
| Value | 0.00 | 0.00 | 0.00 | 5.20 |
| Date | 04-May-2012 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| <input type="checkbox"/> Female beneficiaries (Percentage, Custom Supplement) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 0.00 | 0.00 | 52.00 |
| Annual electricity supply from CLSG imports at utility level (disaggregated: Liberia Electricity Cor | | | | |
| ► Annual electricity supply from CLSG imports at utility level (disaggregated: Liberia Electricity Corporation, Sierra Leone National Power Authority, Guinea - Electricite de Guinee (Component 1) (Gigawatt-hour (GWh), Custom) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 0.00 | 0.00 | 300.00 |
| Date | 04-Feb-2013 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| Difference between the annual weighted cost of imported electricity through the CLSG and the annual | | | | |
| ► Difference between the annual weighted cost of imported electricity through the CLSG and the annual weighted cost of others sources of supply for utilities in Liberia and Sierra Leone (Component 1) (Amount(USD), Custom) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.42 | 0.42 | 0.42 | 0.30 |
| Date | 04-Feb-2013 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| Cote d'Ivoire export capability to CLSG countries (Component 1) | | | | |
| ► Cote d'Ivoire export capability to CLSG Countries (component 1) (Number, Custom) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 0.00 | 0.00 | 200.00 |
| Date | 01-Nov-2018 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| WAPP Priority projects brought to the point where investment-grade feasibility studies and associate | | | | |
| ► WAPP Priority projects brought to the point where investment-grade feasibility studies and associated documentation have been completed (Number, Custom) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 6.00 | 7.40 | 7.40 | 9.00 |
| Date | 04-Feb-2013 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| Ratio of annual total hours of synchronization of WAPP Zone A against total hours in a year within T | | | | |



| ► Ratio of annual total hours of synchronization of WAPP Zone A against total hours in a year within TCN-CEB-GRIDCO interconnection (Component 2) (Percentage, Custom) | | | | |
|--|-------------|-------------------|------------------|-------------|
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 0.00 | 0.00 | 50.00 |
| Date | 04-Feb-2013 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |

Intermediate Results Indicators by Components

| Technical Assistance and Integration of WAPP Network | | | | |
|--|-------------|-------------------|------------------|-------------|
| ► Synchronization equipment installed (Yes/No, Custom) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | No | No | No | Yes |
| Date | 04-May-2012 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| ► Key experts recruited to support WAPP Secretariat (Number, Custom) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 1.00 | 5.00 | 5.00 |
| Date | 04-May-2012 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| Institutional Framework and Project Oversight | | | | |
| ► Regional Transmission Company fulfillment of obligations on time and to the quality required. (Component 1) (Text, Custom) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | none | yes | yes | yes |
| Date | 04-May-2012 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| ► Number of grievances received and satisfactorily resolved (Percentage, Custom) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 0.00 | 99.00 | 100.00 |
| Date | 04-May-2012 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| Supply Alternatives Studies and Project Preparation Support | | | | |
| ► Number of supply alternative analyses completed at Feasibility Stage (Number, Custom) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 0.00 | 0.00 | 3.00 |



| Date | 04-Feb-2013 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
|--|-------------|-------------------|------------------|-------------|
| Power Interconnection between Cote d'Ivoire, Liberia, Sierra Leone and Guinea | | | | |
| ▶ 225 kV Substations constructed (disaggregated by location) (Component 1) (Number, Custom) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 8.00 | 9.50 | 11.00 |
| Date | 04-Feb-2013 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| □ Kamakwie (Number, Custom Breakdown) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 0.25 | 0.50 | 1.00 |
| Date | 04-May-2012 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| □ Yiben (Number, Custom Breakdown) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 0.25 | 0.50 | 1.00 |
| Date | 04-May-2012 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| □ Bumbuna (Number, Custom Breakdown) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 0.95 | 1.00 | 1.00 |
| Date | 04-May-2012 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| □ Bokongor (Number, Custom Breakdown) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 0.98 | 1.00 | 1.00 |
| Date | 04-May-2012 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| □ Kenema (Number, Custom Breakdown) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 0.98 | 1.00 | 1.00 |
| Date | 04-May-2012 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |



| | | | | |
|---|-------------|-------------------|------------------|-------------|
| <input type="checkbox"/> Mano (Number, Custom Breakdown) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 0.95 | 1.00 | 1.00 |
| Date | 04-May-2012 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| <input type="checkbox"/> Monrovia (Number, Custom Breakdown) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 0.95 | 1.00 | 1.00 |
| Date | 04-May-2012 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| <input type="checkbox"/> Buchanan (Number, Custom Breakdown) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 0.95 | 1.00 | 1.00 |
| Date | 04-May-2012 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| <input type="checkbox"/> Nzerekore (Number, Custom Breakdown) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 0.25 | 0.50 | 1.00 |
| Date | 04-May-2012 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| <input type="checkbox"/> Yekepa (Number, Custom Breakdown) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 0.95 | 1.00 | 1.00 |
| Date | 04-May-2012 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| ► Transmission lines constructed or rehabilitated under the project (Kilometers, Custom) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 1,220.00 | 1,285.00 | 1,349.00 |
| Date | 04-Feb-2013 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| <input type="checkbox"/> Transmission line from Kamakwie to Linsan (Kilometers, Custom Breakdown) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 117.00 | 130.00 | 160.00 |



| | | | | |
|--|-------------|-------------------|------------------|-------------|
| Date | 04-Feb-2013 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| <input type="checkbox"/> Transmission line constructed from Yiben-Kamakwie (Kilometers, Custom Breakdown) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 44.00 | 60.00 | 60.00 |
| Date | 04-Feb-2013 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| <input type="checkbox"/> Transmission line constructed from Bumbuna-Yiben (Kilometers, Custom Breakdown) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 73.00 | 73.00 | 73.00 |
| Date | 04-May-2012 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| <input type="checkbox"/> Transmission line constructed from Bikongor to Bumbuna (Kilometers, Custom Breakdown) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 146.00 | 146.00 | 146.00 |
| Date | 04-Feb-2013 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| <input type="checkbox"/> Transmission line constructed from Kenema-Bikongor (Kilometers, Custom Breakdown) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 96.00 | 96.00 | 96.00 |
| Date | 04-Feb-2013 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| <input type="checkbox"/> Transmission line constructed from Mano-Kenema (Kilometers, Custom Breakdown) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 115.00 | 115.00 | 115.00 |
| Date | 04-Feb-2013 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| <input type="checkbox"/> Transmission line constructed from Monrovia-Mano (Kilometers, Custom Breakdown) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 101.00 | 107.00 | 107.00 |
| Date | 04-Feb-2013 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| <input type="checkbox"/> Transmission line constructed from Buchanan-Monrovia (Kilometers, Custom Breakdown) | | | | |



| | Baseline | Actual (Previous) | Actual (Current) | End Target |
|---|-------------|-------------------|------------------|-------------|
| Value | 0.00 | 112.00 | 112.00 | 112.00 |
| Date | 04-Feb-2013 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| <input type="checkbox"/> Transmission line constructed from Yekepa-Buchanan (Kilometers, Custom Breakdown) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 229.00 | 229.00 | 229.00 |
| Date | 04-Feb-2013 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| <input type="checkbox"/> Transmission line constructed from Yekepa-Nzerekore (Kilometers, Custom Breakdown) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 3.20 | 15.00 | 49.00 |
| Date | 04-Feb-2013 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| <input type="checkbox"/> Transmission line constructed from Man-Yekepa (Kilometers, Custom Breakdown) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 143.00 | 152.00 | 152.00 |
| Date | 04-Feb-2013 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |
| <input type="checkbox"/> Transmission lines rehabilitated under the project (Kilometers, Custom Breakdown) | | | | |
| | Baseline | Actual (Previous) | Actual (Current) | End Target |
| Value | 0.00 | 0.00 | 0.00 | 0.00 |
| Date | 04-May-2012 | 14-Dec-2020 | 09-Jun-2021 | 15-Nov-2022 |

Performance-Based Conditions**Data on Financial Performance****Disbursements (by loan)**

| Project | Loan/Credit/TF | Status | Currency | Original | Revised | Cancelled | Disbursed | Undisbursed | % Disbursed |
|---------|----------------|-----------|----------|----------|---------|-----------|-----------|-------------|-------------|
| P113266 | IDA-51100 | Closed | USD | 144.50 | 144.49 | 0.01 | 129.44 | 0.00 | 100% |
| P113266 | IDA-61480 | Effective | USD | 59.57 | 59.57 | 0.00 | 59.51 | 0.06 | 100% |

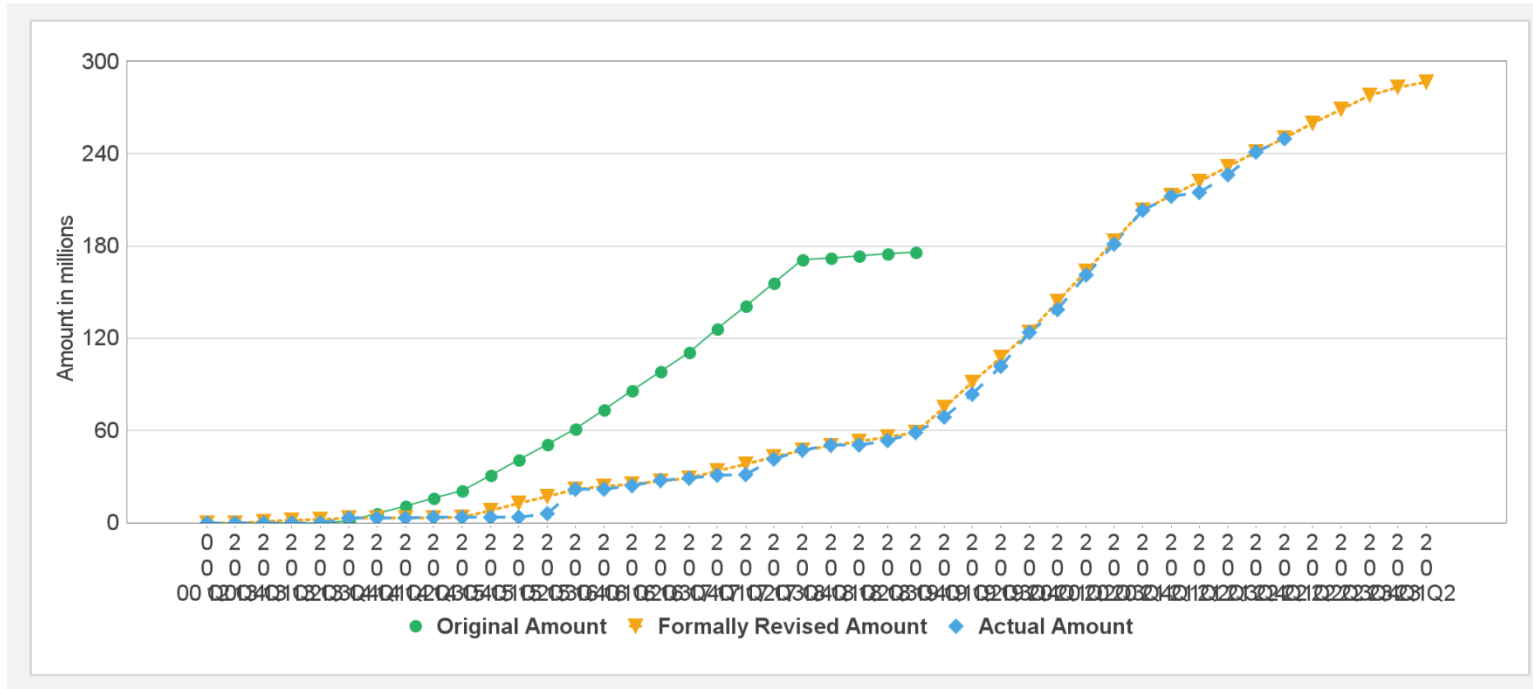


| | | | | | | | | | | |
|---------|-----------|-----------|-----|-------|-------|------|-------|-------|----------------------------------|------|
| P113266 | IDA-61500 | Effective | USD | 22.66 | 22.66 | 0.00 | 11.47 | 11.18 | <div style="width: 51%;"></div> | 51% |
| P113266 | IDA-D2440 | Effective | USD | 17.50 | 17.50 | 0.00 | 1.64 | 15.50 | <div style="width: 9.5%;"></div> | 9.5% |
| P113266 | IDA-D2470 | Effective | USD | 22.66 | 22.66 | 0.00 | 22.45 | 0.00 | <div style="width: 100%;"></div> | 100% |
| P113266 | IDA-H7700 | Effective | USD | 31.50 | 31.50 | 0.00 | 25.50 | 3.43 | <div style="width: 88%;"></div> | 88% |

Key Dates (by loan)

| Project | Loan/Credit/TF | Status | Approval Date | Signing Date | Effectiveness Date | Orig. Closing Date | Rev. Closing Date |
|---------|----------------|-----------|---------------|--------------|--------------------|--------------------|-------------------|
| P113266 | IDA-51100 | Closed | 31-May-2012 | 16-Aug-2012 | 13-Feb-2015 | 31-Dec-2017 | 15-Dec-2020 |
| P113266 | IDA-61480 | Effective | 17-Nov-2017 | 04-Jan-2018 | 04-Oct-2018 | 15-Dec-2020 | 15-Nov-2022 |
| P113266 | IDA-61500 | Effective | 17-Nov-2017 | 11-Dec-2017 | 10-Oct-2018 | 15-Dec-2020 | 15-Nov-2022 |
| P113266 | IDA-D2440 | Effective | 17-Nov-2017 | 18-Dec-2017 | 28-Feb-2018 | 15-Dec-2020 | 15-Nov-2022 |
| P113266 | IDA-D2470 | Effective | 17-Nov-2017 | 11-Dec-2017 | 10-Oct-2018 | 15-Dec-2020 | 15-Nov-2022 |
| P113266 | IDA-H7700 | Effective | 31-May-2012 | 20-Aug-2012 | 27-Dec-2012 | 31-Dec-2017 | 15-Nov-2022 |

Cumulative Disbursements





Restructuring History

Level 2 Approved on 30-Jan-2015 ,Level 2 Approved on 21-May-2019 ,Level 2 Approved on 01-Jun-2020 ,Level 2 Approved on 30-Jun-2020 ,Level 2 Approved on 30-Nov-2020

Related Project(s)

P163033-WAPP-APL4 (Phase 1): Côte d'Ivoire Liberia Sierra Leone and Guinea Regional Interconnector- Additional Financing ,P174842-WAPP APL4 (Phase 1) - Côte d'Ivoire, Sierra Leone, Liberia, and Guinea Power System Re-development – Additional Financing
