Millennium Challenge Account - Senegal II

Monitoring and Evaluation Plan

January 2022

Version 1

TABLE OF CONTENTS

Preamble 4

List of Acronyms 5

List of Tables 7

List of Diagrams 8

I. Compact and Objective Overview 9

I.1 Introduction 9

I.2 Program Logic 10

I.2.1 Compact Background 10

I.2.2 Compact Logic 11

I.3 Project Description and Logic 13

I.3.1 Modernizing and Strengthening Senelec's Transmission Network Project (Transmission Project) 14

I.3.2 Improving Electricity Access in Rural and Peri-urban Areas Project (Access Project) 21

I.3.3 Project Power Sector Enabling Environment and Capacity Development Project (Reform Project) 27

I.4 Projected Economic Benefits 37

I.4.1 Economic Analysis of the Transmission Project 38

I.4.2 Economic Analysis of the Access Project 39

I.4.3 Economic Analysis of the Reform Project 39

I.5 Expected Program Beneficiaries 41

I.5.1 Analysis of the Transmission Project Beneficiaries 42

I.5.2 Analysis of the Access Project Beneficiaries 42

I.5.3 Analysis of the Reform Project Beneficiaries 43

II. Monitoring Component 43

II.1 Summary of the Monitoring Strategy 43

II.2 Beyond Performance Monitoring 44

II.3 Data Quality Review 46

II.4 Standard Reporting Requirements 46

III. Evaluation Component 47

III.1 Summary of the Evaluation Strategy 47

III.2 Specific independent evaluation plans 48

III.2.1 Summary of Specific Independent Evaluation Plans 48
III.2.2 Transmission Project Evaluation 48
III.2.3 Access Project Evaluation 50
III.2.4 Reform Project Evaluation 51
III.3 Summary of Activities or Sub-Activities without Evaluations 53
IV. M&E Implementation and Management 53
IV.1 Responsibilities 53
IV.2 MCA Data Management System for the Monitoring and Evaluation 55
IV.3 Review and Revision of the Monitoring and Evaluation Plan 55
IV.4 Monitoring & Evaluation Budget 56
IV.5 Monitoring & Evaluation Work Plan 56
ANNEX I: Indicator Documentation Table 57
ANNEX II: Table of Indicator Baselines and Targets 93
ANNEX III: Modification of the M&E Plan 139
ANNEX IV: Sub-activity logics for the Reform Project 140
ANNEX V: Tables documenting changes from Compact Annex III to M&E Plan 147

Preamble

This Monitoring and Evaluation (M&E) Plan:

- is part of the action plan set out in the Millennium Challenge Compact (Compact) signed on December 10, 2018, between the United States of America, acting through the Millennium Challenge Corporation (MCC), a United States Government corporation, and the government of the republic of Senegal, acting through its Ministry of Economy, Finance and Planning;
- will support provisions described in the Compact; and
- is governed by and follows the principles stipulated in the *Policy for Monitoring and Evaluation of Compacts and Threshold Programs* (MCC M&E Policy).

This M&E Plan is considered a binding document, and failure to comply with its stipulations could result in suspension of disbursements. It may be modified or amended as necessary following the MCC M&E Policy, and if it is consistent with the requirements of the Compact and any other relevant supplemental legal documents.

List of Acronyms

ANSD	Agence Nationale de la Statistique et de la Démographie (National Statistics and Demography Agency)
APIX	Agence pour la Promotion des Investissements et des grands travaux (National Agency for the Promotion of Investments and Major Projects)
ASER	Agence Sénégalaise d'Electrification Rurale (Senegalese Rural Electrification Agency)
BT	Basse Tension (Low Voltage)
BART	Bureau d'Accès des Tiers au réseau (Bureau for Third Party Network Access)
CBA	Cost-Benefit Analysis
CER	Concessionnaire d'électrification rurale (Rural Electrification Concessionaire)
CMMS	Computerized Maintenance Management System
CRSE	Commission de Régulation du Secteur de l'Électricité (Electricity Sector Regulatory Commission)
CP	Condition Precedent
CS	Conseil de Surveillance of MCA-Senegal II (Board of Directors)
DANQS	Direction Analyse Normalisation Qualité de Service (Department of Analysis Standardization Service Quality)
DEEC	Direction de l'Environnement et des Etablissements Classés (Department of the Environment and Protected Areas)
DEG	Direction des Etudes Générales (General Studies Department)
DESA	Direction de l'Exploitation Système et des Achats (Department of System Operation and Energy Purchases)
DPR	Direction Principale des Réseaux (Lead Department of Networks)
DQR	Data Quality Review
DSR	Direction de la Stratégie et de la Réglementation (Strategy and regulation department)
GIE	Groupement d'Intérêt Economique (Economic Interest Group)
GWh	Gigawatt hours,
EMS	Energy Management System
ERIL	Électrification Rural d'Initiative Local (Local Electrification Initiative)
ERR	Economic Rate of Return
ESP	Environment and Social Performance
EVA	Plateforme de Suivi-évaluation (Monitoring and evaluation system)
FSE	Fond de Soutien à l'Energie (Energy Support Fund)
GIS	Geographic Information System
GoS	Government of Senegal (also referred to as "the Government")
GPF	Groupement de Promotion Féminine (Women's Promotion Group)
GSI	Gender and Social Inclusion
HV	High Voltage

IPP	Independent Power Producer
kV	kilovolt
ITT	Indicator Tracking Table
IDMS	Integrated Database Management System
kWh	Kilo watt hour
LV	Low Voltage
M&E	Monitoring and Evaluation
MCA	Millennium Challenge Account – Senegal II
MCC	Millennium Challenge Corporation
MIS	Management Information System
MOSES	Management Oversight Social and Environmental Support
MPE	Ministry of Petrol & Energy
MV	Medium Voltage
MVA	Megavolt amperes
MW	Megawatt
MWh	Megawatt hour
NPV	Net present value
PIMC	Plan Intégré à Moindre Coût (Least-Cost Inegrated Investment Plan)
POC	Point of Contact
PP	Parties Prenantes (Stakeholders)
PPP	Public Private Partnership
PSP	Private Sector Participation
PSE	Plan Sénégal Émergent (Senegal National Development Plan)
QDRP	Quarterly Disbursement Request Package
RI	Réseau Interconnecté (Interconnected Network)
RMA	Revenu Maximum Autorisé (Maximum Income Allowed)
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
Senelec	Senegal National Electricity Company
SGA	Social and Gender Assessment
SIP	Système d'Information de la Production (Generation Information System)
SIR	Système d'Information Réseau (Network Information System)
SSE	Système de Suivi-Evaluation (Monitoring and Evaluation System)
ToR	Terms of Reference
TPA	Third-Party Access
TSO	Transmission System Operator
HV	High Voltage

List of Tables

Table 1: Overview of definitions and measurement of concepts included in the Reform Project Objective ……..……Page 31

Table 2: Summary of the economic rate of return ……. ……Page 37

Table 3: Summary of types of reforms and associated impact variables reviewed in studies on the power sector reform which projects ERR are based on …….……. Page 40

Table 4: Expected Program Participants……...Page 41

Table 5: Expected Program Beneficiaries……...……. Page 42

Table 6: Summary of specific independent evaluation plans ……...……Page 48

Table 7: Evaluation Questions and Indicators of the Transmission Project…….……Page 49

Table 8: Evaluation Questions and Indicators of the Access Project……..……. Page 50

Table 9: Evaluation Questions and Indicators of the Reform Project ...……..…… Page 51

List of Diagrams

Diagram 1: Compact Project Logic ……..……..Page 13

Diagram 2: Transmission Project Logic ...……...Page 18

Diagram 3: Access Project Logic …..…….……..Page 25

Diagram 4: Reform Project Logic ..……. Page 33

I. Compact and Objective Overview

I.1 Introduction

The Monitoring and Evaluation (M&E) Plan serves as a guide for program implementation and management, so that Millennium Challenge Account – Senegal II (MCA-Senegal II) management staff, Steering Committee members, Executive Committee, Consultative Group members, program implementers, beneficiaries, and other stakeholders understand the progress being made toward the achievement of objectives and results and are aware of variances between targets and actual achievement during implementation.

This M&E Plan is a management tool that provides the following functions:

- *Describes the program logic and expected results.* Gives details about what impacts the Compact and each of its components are expected to produce in economic, social, and gender areas and how these effects will be achieved.

- *Sets out data and reporting requirements and quality control procedures*. Defines indicators, identifies data sources, frequency to define how performance and results will be measured. Outlines the flow of data and information from the project sites through to the various stakeholders both for public consumption and to inform decision-making. It describes the mechanisms that seek to assure the quality, reliability and accuracy of program performance information and data.

- *Establishes a monitoring framework*. Establishes a process to alert implementers, MCA-Senegal II management, stakeholders, and MCC whether the program is achieving its major milestones during program implementation and provides a basis for making program adjustments.

- *Describes the evaluation plan*. Explains in detail how MCC and MCA-Senegal II will evaluate whether the interventions achieve their intended results and expected impacts over time.

- *Includes roles and responsibilities*. Describes in detail the M&E staff are responsibilities.

I.2 Program Logic

I.2.1 Compact Background

Senegal is a country in West Africa bordering the Atlantic Ocean in the west, Mauritania in the north and north-east, Mali in the south and south-east, and Guinea and Guinea Bissau in the south. It surrounds most of The Gambia, an English-speaking country with the smallest surface area on the continent.

The population was estimated at 16,209,125 inhabitants in 2019, 50.22% of which were women. It was expected to reach 16,705,608 inhabitants in 2020 (ANSD,[1] 2021). The population is unevenly distributed. The capital Dakar accounts for 23% of the total population but only 0.3% of the country's total surface area.

Senegal is a developing country. In 2019, it ranked 33rd in Africa and 166th globally on the human development index (UNDP,[2] 2019). The poverty rate was 46.7% according to the last estimates of the 2011 poverty survey compared to 37.8% in 2019 (ANSD, 2020). It was estimated at 67.9% in 1994-1995 (ESAM[3] I) and 57.1% in 2001-2002 (ESAM II). Despite this growth, there are disparities between urban and rural areas, men and women and the youth. Rural poverty is 57.3% compared to 41.2% in urban areas and 26.1% in Dakar.

Between 2014 and 2019, Senegal recorded economic growth rates consistently exceeding 5%. Good prospects were expected for 2020/2021 were it not for the COVID-19 pandemic that considerably altered growth projections to 1.3% for 2020 (World Bank, 2020).

To support poverty reduction, Senegal was granted a first Compact, signed in 2009 and implemented between 2010 and 2015, which focused on the agricultural, land, and transportation sectors with two major projects: (1) roads rehabilitation and (2) irrigation and water resource management. Strategic investments were implemented in the Casamance and the Senegal River Valley to reinforce the road network and key irrigation systems respectively. The first Compact was designed to boost economic activity, specifically agricultural productivity, and increase incomes of the target beneficiaries by establishing support policies and administrative systems to consolidate results. It was expected to increase the income of 1.5 million Senegalese by a total of $720 million over a 20-year period. The independent evaluation reports are accessible online on MCC's evaluation catalog.

After the completion of the Compact in September 2015, Senegal became eligible to develop a second Compact in December 2015 based on the sustained positive performance in the policy areas

[1] ANSD (Senegal National Statistics and Demographic Agency): www.ansd.sn
[2] 2019 African countries ranking according to UNDP HDI (United Nations Development Program)
[3] ESAM: Senegalese Households Survey is a nation-wide survey on households' consumption and expenses. The first survey was conducted in 1994/1995 (ESAM I) and covered a sample of 3,300 households. The second one (ESAM II) was conducted in 2001/2002 and covered 6,600 households across the country and representing all walks of life of the country.

measured by MCC's scorecard, including good governance, economic freedom, and investment in human capital, as well as the strength of the performance of the first Compact.

The Constraints Analysis, conducted in June to November 2016 through a participatory process based on evidence and collection of qualitative data, identified two major constraints related to private investment. These include:

- **High Cost of Energy:** The high cost of electricity to grid-connected firms, low access to electricity outside of Dakar, and to a lesser extent, the unreliability of electricity reduces firms' cost-effectiveness by increasing costs and uncertainty of production.

- **Distortive Business Policy Environment:** Complex and burdensome administrative, regulatory, and legal barriers reduce foreign firms' profitability and competitiveness by raising the cost of inputs and increasing costs of regulatory compliance. Domestic firms are incentivized to remain small and unproductive rather than upgrade to more sophisticated modes of production.

After the validation of two concept notes, the Government of Senegal (GoS or "the Government") and MCC decided to focus the Compact on the electricity sector. On December 10, 2018, the MCC Board of Directors approved the Compact, otherwise known as the MCC Senegal Power Compact, which entered into force on September 9, 2021. The five-year Compact is comprised of a $550 million grant investment from the United States Government, along with a $50 million supplemental investment from the Senegalese government for a total of $600 million. The Compact goal is to reduce poverty through economic growth with a focus on the electricity sector through three major projects[4]:

- The Modernizing and Strengthening of Senelec Transmission Network Project (Transmission Project);

- The Improving Electricity Access in Rural and Peri-urban Areas Project (Access Project); and

- The Power Sector Enabling Environment and Capacity Development Project (Reform Project).

I.2.2 Compact Logic

The three related and complementary projects (Transmission, Access, and Reform) are designed to address the High Cost of Energy constraint as laid out above. The Compact investments are

[4] For more information about this program, please visit the Senegal II page on our website https://www.mcc.gov/where-we-work/program/senegal-power-compact#:~:text=The%20five-year%2C%20%24550%20million%20MCC%20Power%20Compact%2C%20between,to%20addresses%20these%20significant%20constraints%20to%20economic%20growth

aligned with development priorities of the GoS defined in the *Plan Sénégal Émergent* (Senegal Development Plan).

The Objective of each of the three Projects is to:

- **Provide quality electricity from the lowest cost sources available to Senelec to meet the growing demand on the interconnected network in Senegal (Transmission Project).**

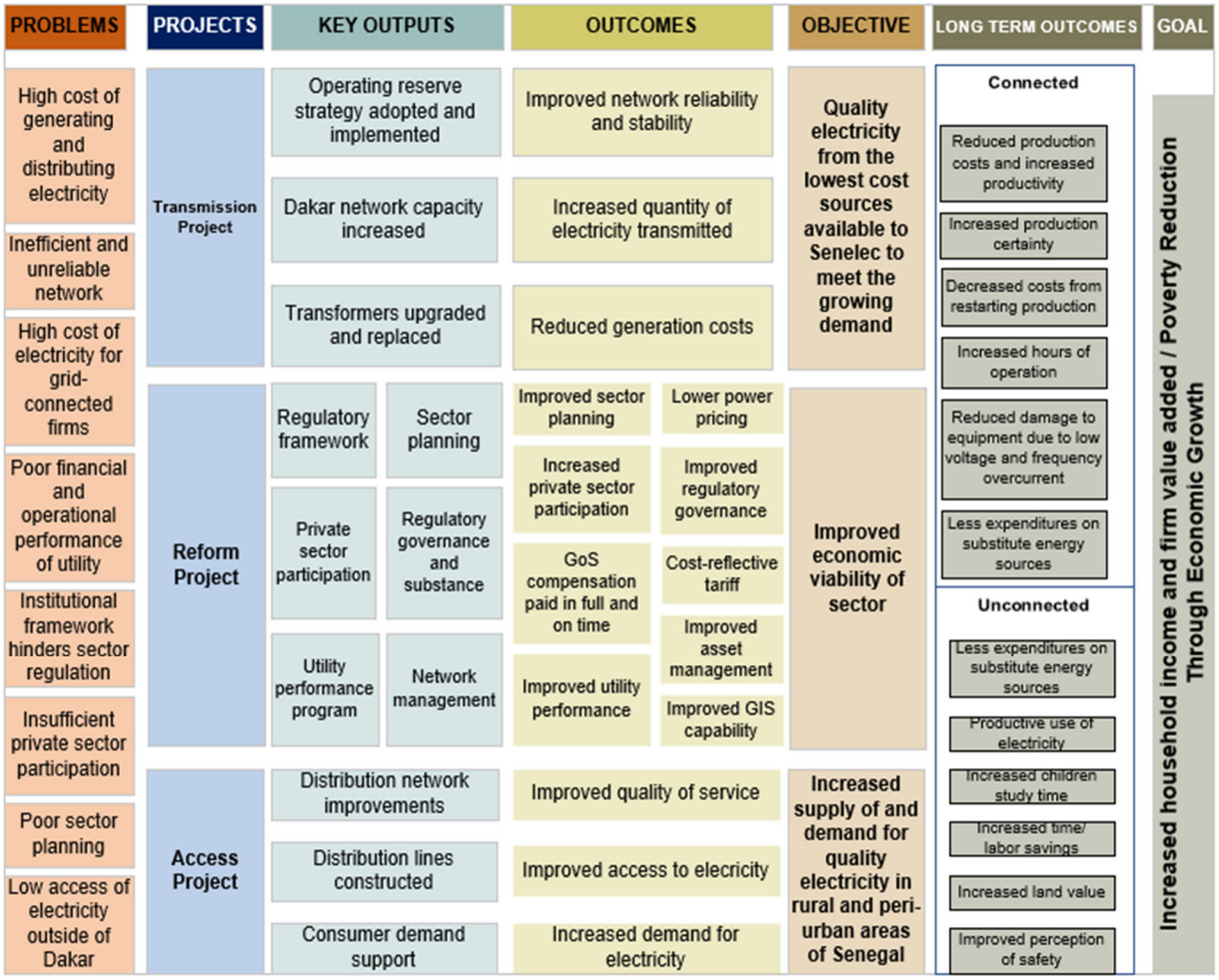
- **Increase the supply and demand for quality electricity in rural and peri-urban areas of Senegal (Access Project).**

- **Create an enabling environment to improve the financial viability of, and to ensure good governance in, the power sector, with the intent of improving the quality and quantity of the electricity supply (Reform Project).**

Taken together, the Projects are expected to lead to longer term outcomes, located toward the right side of the program logic diagram (Diagram 1). **For grid-connected households and firms**, this includes reducing costs associated with restarting production following service interruptions, reducing the cost associated to damaged equipment due to voltage fluctuations, and increasing the hours of operation. **For unconnected households and firms**, this includes the productive use of electricity and less expenditures on substitute energy sources.

The program logic below illustrates and describes the causal relationships among the program components and synthesizes outcomes intended to achieve the project objectives and the program goal.

Diagram 1: Compact Logic



I.3 Project Description and Logic

The root cause analysis, conducted in the second phase of the Compact development process, from November 2016 to March 2017, through a participatory approach involving over 120 public and private sector actors, international development donors, and civil society organizations, identified the following problems:

- **High costs of Senelec's electricity service**: Senegal's electricity cost is among the highest compared to countries with similar incomes. This situation is attributable to (i) high generation costs due to the dependence on imported heavy fuel oil (HFO) and (ii) the poor conditions of generation assets, which are mainly thermal with high operating costs. In addition, the consumer tariff does not reflect the cost of service. The Government compensates the difference between consumer and actual tariffs, which is a heavy burden on public finances.

- **The access strategy in rural and peri urban areas is not optimized:** There are major disparities between rural and urban areas' access to electricity. Weak regulation and high connection costs in rural areas and the absence of control over the urban development are the principal reasons. This situation leads to low electrification rates in rural and peri urban areas. In 2017, the electrification rate in rural areas was estimated at 40% against over 90% in Dakar and 67.9% nationally. Through the *Plan Sénégal Emergent*, the GoS targets universal access by 2025.

- **Expenses in alternative energy sources are necessary**: Low service quality results in frequent power outages on the transmission and distribution networks. To address these concerns, businesses and households resort to alternative energy sources (e.g., generators), the costs of which may be higher than those of electricity from the public utility.

- **The institutional and regulatory framework has weaknesses that do not favor private investment**: The regulatory environment is mainly characterized by limited capacities of the regulator and a legal framework that does not favor private investment. Limited funding constrains the development of new infrastructure.

The following sections describe how each of the Compact's projects contribute to addressing the energy constraint to economic growth.

I.3.1 Modernizing and Strengthening Senelec's Transmission Network Project (Transmission Project)

The Transmission Project addresses the constraints of (1) Senelec's high cost of electricity service and (2) low electricity service quality leading to customer expenses in alternative energy sources. The Transmission Project Charter[5] notes the following issues related to the transmission network:

- **Poor transmission network coverage** that is attributable to:
    - The dependence on limited public funding for transmission network projects and the slowness in the implementation of sub-regional projects due to political constraints.
    - Lack of physical space for Senelec to build high voltage (HV) lines or substations serving customers. Securing land for future electricity facilities is often neglected when new residential neighborhoods are developed.
- **Poor network quality:**
    - Incidents on the transmission and distribution networks account for most non-distributed energy.

[5] Project Charters serve as key, foundational documents that support project leads in ensuring team buy-in and authorization for projects, guidance to support onboarding new team members or consultants, and reference document during scope request changes and management meetings.

- The low coverage of the transmission network has particularly weakened the safety of the electric system operation. The minimal security rule n-1 is rarely respected for most electric facilities because of insufficient preventive maintenance.
- Voltage and frequency stability causing power outages force businesses to have their own generation sources, even if those are more costly than electricity from Senelec.

To address the identified root causes, the Project shall support ongoing efforts by Senelec to develop a reliable high-voltage transmission network in and around greater Dakar, which accounts for roughly 60 percent of the nation's electricity demand and 20 percent of its population. This is necessary for Senegal to effectively capitalize on private sector-led investment in generation and to ensure that electricity is reliably delivered to consumers. This is particularly important since much of the private sector interest in the sector is focused on new, lower-cost generation projects, including wind, solar, and natural gas, which depend heavily on a reliable, stable transmission network.

The Transmission Project includes the three following activities:

1) **Transmission Network Build-out Activity**

This Activity seeks to reduce the congestion of overused electricity lines and substations in the Dakar peninsula. It aims to ensure the security and reliability of electricity supply to the Dakar peninsula, while guaranteeing long-term demand, through the construction of a 225 kilovolts (kV) transmission line loop and related infrastructure. MCC and the Government identified and agreed on specific components under this Activity through an assessment of the optimum transmission network configuration and development of an investment plan. This Activity is anticipated to include final design and construction of the following:

A. a second, approximately 22 km, 225 kV underground circuit between Kounoune and Patte-d'Oie, along with related conduits and manholes;

B. an underground, 225 kV, double circuit between Kounoune and Cap des Biches of approximately seven km in length, an extension of the existing 225 kV gas-insulated substation at Kounoune, as well as installation of two new 150 megavolt amperes (MVA) 225/90 kV transformers[6], and a gas-insulated substation, including busbars and six feeders plus space for four future feeders, at Cap des Biches substation;

C. a 16 km, 225 kV, undersea cable, between Cap des Biches and Rive Bel Air, and a 225 kV underground, double circuit of approximately two km in length from Rive Bel Air to Centrale Bel Air. The substation improvements shall include two new 150 MVA 225/90

[6] The Project team now expects the new transformers at Cap des Biches and Bel Air will be 200 MVA each rather than 150 MVA. This change is based on load flow analyses that MCC due diligence consultants conducted in 2019 after Compact signature.

kV transformers, new 225kV gas-insulated substation, with feeders and switches, grounding equipment, and control equipment, as well as a second 90kV gas-insulated substation as an extension of the existing 90 kV one at Centrale Bel Air.

The final configuration of the network for this Activity will be determined and approved in the final design.

These activities will enable Senegal to fully take advantage of the private sector investments in the electricity generation and to ensure reliable electricity supply to consumers in Dakar.

With the Compact entry into force in Quarter (Q) 3 of 2021 and expected finalization of design studies in Q1 of 2022, the contract for the engineering-construction firm under the Transmission Project is expected to start in Q4 of 2022. Completion dates are expected in Q2 of 2024, Q4 of 2024 and Q1 of 2025 respectively for the installation of underground lines, substations, including demolition works, and installation of undersea lines. It should be noted that the current Cost-Benefit Analysis (CBA) assumed the commissioning of the Kounoune – Patte-d'Oie section (Phase 1) in 2023.

2) Transformer Replacement Program Activity

This Activity aims to address grid reliability and electricity quality considering growing electricity demand resulting from increased electricity access and Senegal's strong economic growth. Specifically, the Activity includes support for an existing transformer replacement initiative on the high- and medium-voltage networks by upgrading or replacing critical transformers at Touba, Diass, Hann, and Aéroport substations. In conjunction with investments under the Transmission Network Build-out Activity, these upgraded or replaced transformers are intended to strengthen Senegal's transmission network to facilitate further extension of the interconnected electrical grid under the Access Project, as well as future grid extension investments by the Government or others.[7]

Specifically, the Activity consists of the:

A. Addition of an 80 MVA 90/30 kV power transformer to the Hann substation;

B. Addition of an 80 MVA 90/30 kV power transformer to the Léopold Sédar Senghor (LSS) Airport substation[8];

C. Addition of an 80 MVA 225/30 kV power transformer to the Touba substation; and

D. Replacement of two 40 MVA 225/30 kV power transformers in Diass by 80 MVA.

[7] Any possible connection between this Activity and the Access Project is not reflected in the project logics. Compact M&E staff understands these investments will occur in different geographic localities. Therefore, it does not see a logical link between the two.

[8] The Compact originally included the addition of one 80 MVA transformer with the understanding that Senelec would upgrade the two existing transformers from 40 to 80 MVA. Senelec has not initiated this upgrade and is requesting MCA/MCC consider financing the replacements. This requested modification is in the process of being assessed by MCA according to its modification procedures.

Construction is expected to begin in Q4 of 2022 and conclude in Q4 of 2025 for a commissioning two months later. The CBA model assumed the implementation of the first transformer in 2022 (LSS Airport substation).

3) Grid Stabilization Activity

This Activity aims to support the sustainability of the Transmission Project and the optimal performance of Senegal's transmission network through the addition of operating[9] reserves to address network stability issues. This is anticipated to include a combination of network management improvements and batteries for energy storage sufficient to guarantee operating reserve capacity. This is expected to ensure network stability during frequency excursion scenarios and to mitigate the intermittent nature of renewable energy generation.

In addition to activities funded by other financial and technical partners, specifically AFD (Agence Française de Développement), KfW (Kreditanstalt für Wiederaufbau), WB (World Bank), Africa REN, ERS (Energy Resources SENEGAL) and Lekela that will support Senelec, MCC will support the following activities:

A. Establishment of remote load shedding system to mitigate the impact of major network events such as the loss of Sendou (125 MW), Karpowership (235 MW), Contour Global (95 MW), and the future IPP station of Cap des Biches (300 MW);

B. Commissioning of storage batteries of a minimal capacity of 80MW-80MWh, specifically for ancillary services of frequency setting (primary reserve) and mitigation of intermittent renewable energy sources (In light of potential private sector interest in investing in battery storage and the opportunity to leverage available MCC funding and the Government contribution to obtain sufficient operating reserve capacity through battery storage, MCC and the Government agreed to explore the possibility of structuring a public private partnership (PPP) to implement the battery storage component of this Activity; provided that if a PPP is not possible MCC and the Government shall identify and implement an alternative combination of interventions to ensure the availability of sufficient operating reserves); and

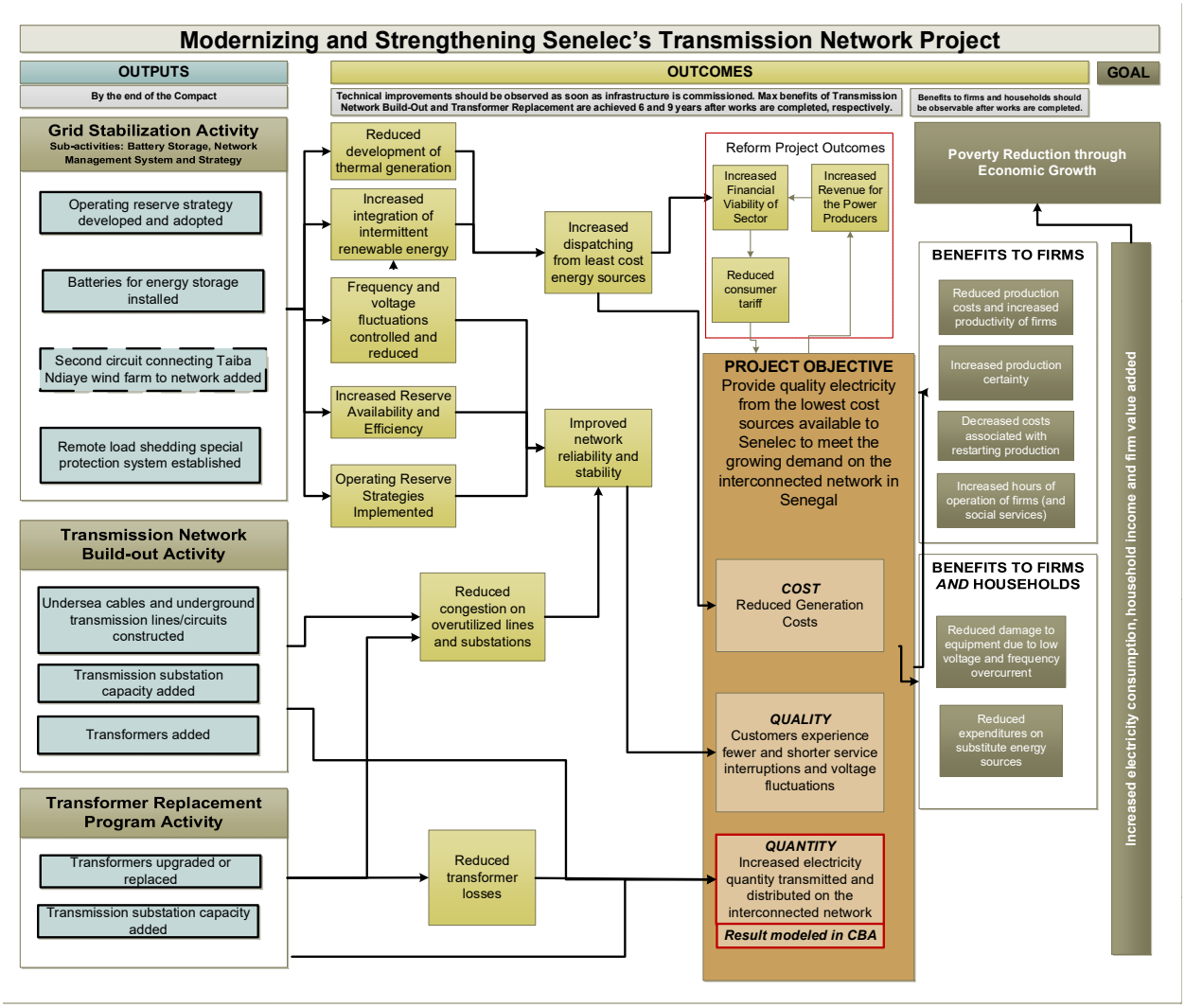
C. A second 225 kV underground circuit to connect Taiba Ndiaye wind farm to the transmission network, to ensure an n-1 security.

The second 225kV underground circuit to connect to the Taïba Ndiaye wind farm to Tobene substation was not included in the Compact but was recommended in the feasibility studies. The project team is currently pursuing this development, but MCC has not yet decided whether it will fund this component.

[9] The Compact uses "spinning reserve" instead of "operation reserve". The latter is more specific because it includes the spinning and non-spinning reserves and storage batteries.

The implementation of the remote load shedding component is expected to start in Q1 of 2022 and completed by Q4 2024. The Transmission Project Logic is presented below with a description of expected outcomes.

Diagram 2: Transmission Project Logic[10]



As mentioned earlier, the **Transmission Project Objective is to provide quality electricity from the lowest cost sources available to Senelec to meet the growing demand on the interconnected network in Senegal**. This Objective is defined in terms of the cost, quality, and quantity of electricity.

The high ***cost*** of electricity was identified as a binding constraint to economic growth in Senegal, which is in large part, due to the country's dependance on relatively expensive HFO as a source for generating power. The Transmission Project, particularly the Grid Stabilization Activity,

[10] The output for the second circuit connecting Taiba Ndiaye wind farm to the network is in a dotted line, because it was not initially included in the Compact.

allows for better integration of renewable intermittent energy sources (e.g., wind and solar), which are considerably cheaper than HFO. The key indicator for measuring this outcome is the **average generation cost per kWh.** While this cost is not explicit in the Project's CBA models, these models use estimated cost-recovery tariffs (that depend, in turn, on average generation costs) faced by different consumer types to value incremental energy across the Compact's projects[11]. Expected average generation cost per kWh at the end of the Compact is 48.85 CFA compared to a baseline of 61.61 CFA in 2019.

Insufficient electricity ***quality*** was also a part of the binding constraint. This problem has multiple causes, including insufficient power supply at peak hours, poor quality of network infrastructure, and poor maintenance and planning. While Senelec has improved service quality, the growing demand for electricity is placing additional pressures on the grid, which in the absence of investments, could lead to a deterioration of service quality. The Transmission Project's investment in the network's capacity and ability to integrate renewable intermittent sources is expected to accommodate the growing demand while improving service quality. Electricity quality will be measured by **the duration and frequency of service interruptions**. A key challenge to measuring these results is the availability and quality of existing utility data. Another challenge is separating the effects of other network investments and variables on those outcomes. Indicators for this result were not drawn from the CBA model[12]. By 2023, the average duration of outages is expected to decrease from 10 to four and the frequency from 11 to five. Non distributed energy is expected to decrease to 13 gigawatt hours (GWh) in 2023 compared to a 2019 baseline of 16.87 GWh. The source of these targets is the Senelec performance contract.

The ***quantity*** aspect of the Project Objective is not explicitly part of the binding constraint. Rather, it reflects necessary investments to respond to the growing demand. The key indicators, aligned with the modeled benefit streams, are **the additional energy transmitted from added transformers** (Transformer Replacement Activity) and **the additional energy transmitted in the Dakar peninsula** (Transmission Network Build-out Activity). The expected annual additional energy transmitted by the end of the Compact is 1,141,168 MWh for the Transmission Network Build-out Activity and 360,745 MWh for the Transformer Replacement Activity.

The Transmission Network Build-out Activity and the Transformer Replacement Program Activity are both expected to increase the capacity of the high-and medium-voltage networks to reduce congestion on overutilized lines and substations and increase the quantity of electricity transmitted on the interconnected network. For the Transmission Network Build-out Activity, additional energy transmitted attributable to the Project will be assessed at the level of 14

[11] The CBA model for the battery storage sub-activity estimates the intermittent energy value that would have been lost and the value of benefits of a better dispatching. However, it is not clear how these indicators are defined and how they could be measured. The Compact investment in batteries will likely change.

[12] The only CBA model for this Activity was for the Battery Storage sub-activity. That model estimated the value of the decrease in unserved energy demand. However, the EA division considers unserved energy to be problematic as it entails assumptions about the counterfactual and with-project scenario. The model also does not have sufficient information for measurement, such as the segments of the network where more energy is expected to be served and the number of service interruptions that are projected to occur or be prevented.

substations in the Dakar peninsula. For the Transformer Replacement Activity, this will be measured at the level of the four substations where transformers are being replaced or added: Touba, Diass, Aeroport LSS, and Hann.

These two activities are also expected to contribute to the network's **improved reliability and stability**. Measurement of the duration and frequency of service interruptions and the quantity of non-distributed energy will be focused on the HV network, which the Transmission Project is expected to affect most directly.

The Grid Stabilization Activity is expected to contribute to the reliability and stability of the interconnected network, as measured by the **quantity of non-distributed energy, duration, and frequency of interruptions of service,** as well as **frequency and voltage stability**. These network-level improvements in reliability of supply are expected to increase the willingness of consumers to pay for electricity services and increase the global electricity consumption of businesses and other consumers connected to the network.

If the Objective is achieved, firms' productivity should increase as improved service quality would result in less reliance on alternative energy sources such as back-up generators, less damage to equipment, and increased hours of business operation. Other grid-connected customers, such as households and social services, would experience similar outcomes.

Improving network reliability and stability also have a less direct (but not less important) effect on grid-connected consumers. It increases the share of less costly generation sources, many of which are renewable, which has the overall effect of reducing generation costs. This may enable a positive feedback loop among the following results: reduced generation costs, increased financial viability of the sector, reduced consumer tariffs, increased induced demand, and increased revenue for the national utility and other power sector companies. In other words, an improvement in efficiency and viability of the sector enables the GoS and/or the electricity sector regulator to decrease consumer tariffs. This increases electricity demand and consumption, which increases revenue for the utility and improves its long-term financial viability. These outcomes are more directly related to the Reform Project.

The known assumptions for the Transmission Project are set out in the list below:

- Sufficient and reliable electricity generation comes online in accordance with projections of Senelec and the Power Africa Master Plan.
- Senelec has the technical capacity to manage and assess the techno-economic criteria for network extension and densification.
- Lines, substations, and power plants defined by Senelec will be in service as per Senelec planning.
- The distribution network (<30kV) is sufficiently strong to deliver electricity reliably to consumers.
- Senelec implements the operating reserve strategy.
- The assets constructed by the Project are effectively operated and maintained.

- Actual electricity demand in Senegal does not deviate from the load forecast scenarios considered in the evaluation of the network requirements.
- Necessary investments in the distribution network are made, including the need for reactive compensation.
- Voltage regulation at Kahone, Bel Air and some units at Cap des Biches are in automatic mode to provide reactive support to the network.
- As per current practice, reactive compensation required for the addition of long new lines (100 km and more) on the main transmission system must be systematically implemented.
- Senelec implements the Environmental and Social Management System (ESMS) it has developed as a condition precedent (CP) and adopts a process of continuous improvement of its environmental performance.

The known risks of the Transmission Project are set out in the list below:

- Violation of any of the assumptions listed above.
- Delay in implementing the operating reserve strategy action plan, which may affect network performance.
- Constraints related to environmental and social impact studies, including the resettlement action plan.
- Delay in Senelec's compliance with the resettlement audit action plan.
- COVID-19 pandemic.
- Delay in the implementation of the generation plan.
- Changes in the demand behavior compared to scenarios considered in the feasibility studies.
- Submarine cables procurement process risks.
- Delay in implementing submarine links due to specific market challenges.

Economic returns as modeled in the CBA are sensitive to:

- Phasing of investments expenses.
- Year that new links are commissioned.
- Infrastructure and environnemental protection cost overruns.
- Significant deviation on the initial scope of works.
- Procurement risks.

I.3.2 Improving Electricity Access in Rural and Peri-urban Areas Project (Access Project)

The Access Project addresses aspects related to both the supply of and demand for electricity identified in recent studies exploring low adoption rates among households, including those located close to the grid (Lee et al, 2016; Chaplin et al, 2017). Specifically, the Project addresses constraints to electricity access and good electricity service quality.

The root causes of the constraints addressed by the Access Project include the following:[13]

- **Electrical grid does not cover the entire country**: The remoteness of sites and low demographic density are the principal reasons network investment and operating costs are high compared to demand. Considerable disparities in access to electricity are noted in the central, southeastern, and southern regions where electrification rates do not reach 10%.[14]

- **Access strategy in rural and peri-urban areas has not been optimized**: The concession model established by ASER divides the country into 10 concessions. Despite the model's innovative nature, the electrification rate remains low mainly because MV feeders do not prioritize targeting productive sectors and infrastructure with high energy demand levels. Also, until tariff harmonization was applied in December 2018, rural consumers paid a relatively higher tariff than urban consumers.

The Access Project will contribute to the Government of Senegal's objective of achieving universal access by 2025. The Project supports the extension of the electrical network in certain areas of southern and central Senegal. Through demand-side investments, the Project aims to increase adoption and electricity consumption rates, facilitate the creation of opportunities for income generating activities and improve knowledge of the profitability of energy in the Access Project's intervention areas. The Project also aims to improve the service quality and reduce technical losses on the distribution network in certain areas around Senegal outside of Dakar. The Project includes three (3) activities:

1) Supply-Side Infrastructure Activity

The Access Project's Supply-Side Infrastructure Activity aims to extend the electrical grid in regions identified based on production potentials which may benefit from access to electricity, relatively strong willingness to pay, and low electrification rates.[15] It includes building approximately 660 km of MV distribution lines and 420 km of LV lines to electrify around 325 localities in five regions in the southern and central regions of Senegal – specifically Kolda, Tambacounda, Fatick, Kaolack, and Sedhiou. MCC and the Government identified areas with potential productive uses that would provide adequate demand to ensure sufficient economic returns and justify electrification.

The Activity is detailed as follows:

A. 115 km of MV lines in banana producing areas in the department of Tambacounda to cover irrigated banana plots and around 29 non-electrified localities;
B. 281 km of MV lines in cashew producing areas in the department of Foundiougne, including around 186 localities;

[13] Concept Notes – affordable and accessible energy for all, March 2017
[14] Ministre de l'énergie -Analyse de la situation des taux d'électrification rurale (2014-2015)
[15] Willingness to Pay for Improved Electricity Services in Senegal (mcc.gov)

C. 157 km of MV lines in Nioro du Rip, Medina Yoro Foulah/Bounkiling to cover up to 66 localities in key cashew growing areas; and
D. 64 km of MV lines in rice growing areas in Vélingara and the electrification of about 44 localities.

The Access Project will enable the connection of 12,700 households, distributed between 1,800 in Tambacounda, 6,400 in Foundiougne, 3,300 in Médina Yoro Foulah/Bounkiling, and 1,200 in Vélingara. The Project is also expected to enable the services of socio-community infrastructure, public lighting, and productive, revenue generating activities.

The final number of kilometers of lines and localities to be electrified will be determined by the final design studies and available funding.

An **improvement of the coverage rate in MCC investment areas** is expected from this Activity, which will be measured by the *number of electrified localities* and the *number of new subscribers*.

Finalization of design studies is expected in 2022. Subject to the satisfaction of CPs for disbursement, construction is expected to start in Q2 of 2023, with completion anticipated by Q4 of 2025.

2) Consumer Demand Support Activity

The Consumer Demand Support Activity aims to increase demand for electricity through demand-based investments, including supporting new connections by improving customer service and the supply of connection equipment for interior wiring, a consumer education and awareness campaign, and facilitating the electrical equipment and appliances market for consumers. It includes the following sub-activities:

a) *Supporting Connections* sub-activity: This sub-activity includes (1) providing technical assistance for customer service support to ensure concessionaires (Senelec or rural electrification concessionaires) are capable of efficiently connecting new consumers and have stock management systems to ensure sufficient connection equipment availability, and (2) assessing the availability and qualifications of service providers for the implementation of interior wiring for households and businesses.
b) *Education Campaign for Electricity Literacy* sub-activity: This sub-activity contains communications and educational campaigns to promote behavior change, including, but not limited to, knowledge of energy efficiency practices with messages tailored for specific audiences, such as rural areas, men, women and the youth, various ethnic and language groups, and underprivileged and vulnerable social groups. The campaign will target 1) consumers connected to the national network, 2) non-connected clients in the project areas, 3) rural clients connected and not connected for productive uses, and 4) other key stakeholders, including local authorities and municipalities, civil society organization and leaders, and private sector associations.

c) *Market Facilitation for Electricity Access sub-activity*: The aim of this sub-activity is to provide technical assistance to equipment vendors, financial institutions, and consumers to increase the availability of and financing mechanisms for productive equipment.

Through these demand-side investments, the Access Project aims to increase the **use of electricity for domestic and productive uses**, facilitate the creation of opportunities for income generating activities in these regions and increase knowledge and awareness of energy efficiency.

The Supporting Connections sub-activity is expected to reduce the **time for consumer connections to the network** through **improvements to Senelec's customer service and connection procedures, the availability and management of equipment necessary** for these new connections, and electricians' **capacity to do the interior wiring for new consumers.** The Education Campaign sub-activity is expected to increase the number of potential clients connecting to the network due to a **better understanding of the connection process, energy efficiency, and productive uses of electricity**. These interventions will help clients save money on their electricity bill, and therefore remain connected to the network. The Market Facilitation for Electricity Access sub-activity is expected to develop the electric appliance and equipment market to increase the number of users and enable electrification rates and consumption levels high enough to justify MCC support to the program.

Subject to the finalization of design studies related to the Consumer Demand Support Activity, the sub-activities are expected to be implemented between Q4 of 2022 and Q4 of 2025 in coordination with the supply-side activities.

3) Distribution Network Reinforcement Activity:

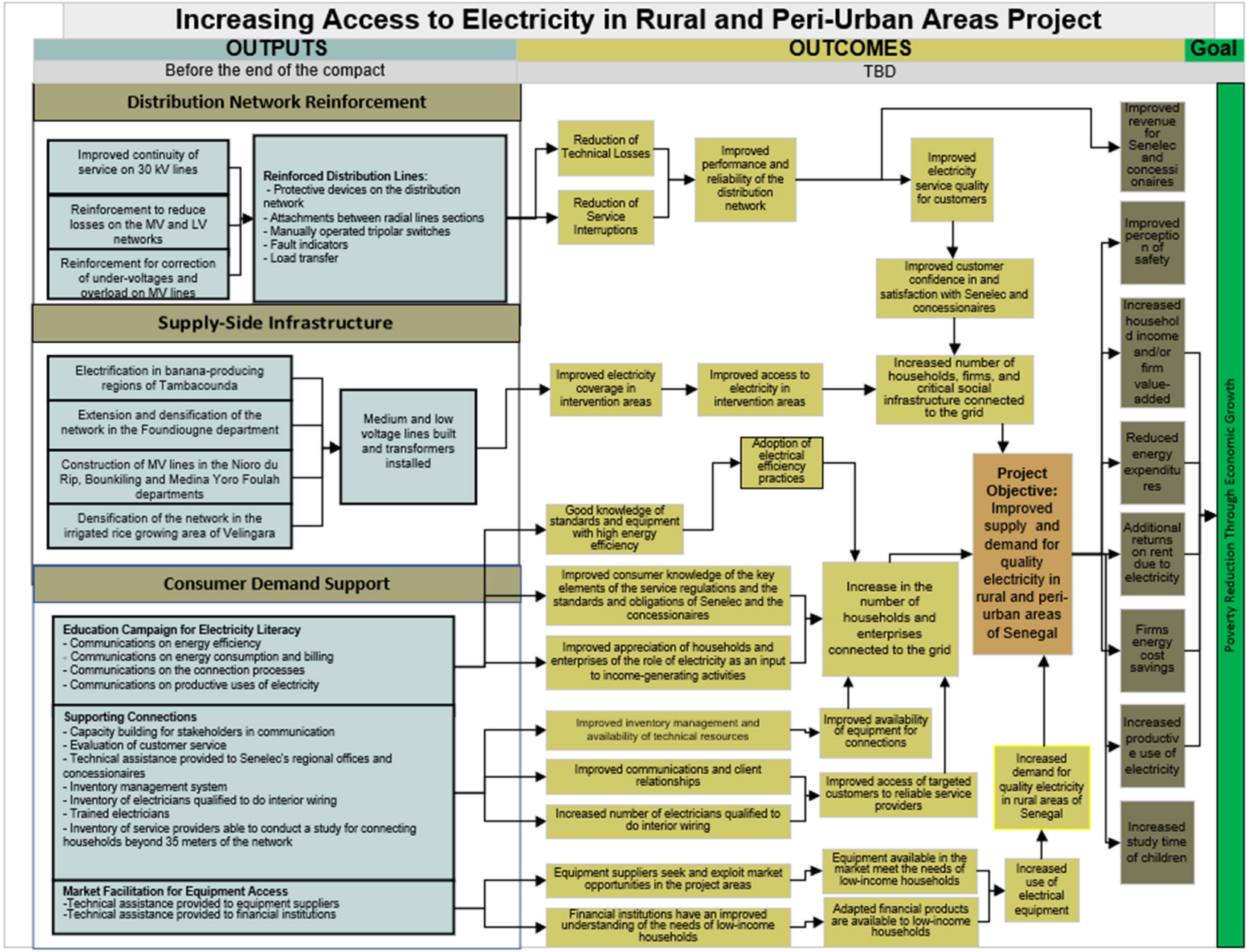
This Activity aims to reduce technical losses and the frequency and duration of power outages in the MV network outside of Dakar through improvements to the 30kV distribution network, including, without limitation, installation of circuit-breakers, capacitors, new or upgraded transformers, local and remote controlled switches to minimize the faulty area on the main section of the lines, automatic control switches at the beginning of long derivation, new line configurations, load transfers, load corrections, and fault indicators to guide operators more quickly during outages and thus reduce their duration.

Ultimately, this component is expected to improve the operational efficiency of the national MV network. It will enable **improved performance and reliability of the distribution network that will be measured** by a *reduction of technical losses, frequency of power outages, and duration of power outages on the MV network outside of Dakar.* It will enable Senelec and concessionaires to ensure more efficient customer service, sell more electricity, and consequently, **improve the financial situation** to be able to reinvest funds in the electricity sector.

Improvement works are expected to start in Q2 of 2023 and be completed in Q4 of 2024.

The logical framework of the Access Project is presented below.

Diagram 3: Access Project Logic



The **Objective of the Access Project is to increase the supply and demand for quality electricity in rural and peri-urban areas of Senegal**, whose key indicators are the *electricity consumption level for household and productive uses in the Compact investment areas.* The CBA conducted to estimate the economic rate of return (ERR) identified increased land property values in rural communities currently without access to electricity and firms' energy cost savings as the key benefit streams. The end of Compact target is 2,273 MWh of annual electricity consumption for domestic use and 2,900 MWh for productive use, with an adoption rate of 56.36%.

The Objective is expected to be attained through the achievement of the key outcomes of the three activities:

- **Increase of the coverage rate in the Compact investment areas** measured *by the number of localities electrified* and **the extension of the electrical grid in investment areas** measured by *the number of new subscribers* (supply-side infrastructure);

- **Improvement of the quality of the electricity service to consumers** measured by the *non-distributed energy on the distribution network* (improving the distribution network);

- **Improved demand for quality electricity in rural areas in Senegal** (consumer demand support); and

- **Improved inventory management** of Senelec and the concessionaires (consumer demand support) measured by the *average number of days between the moment a new consumer pays to an electricity provider and the moment it is effectively connected.*

Ultimately, target beneficiaries whose electricity demand is satisfied are expected to experience improved productivity, time and labor savings, increased children's study time, improved safety and security, reduced energy expenses, increased household incomes and/or added value for businesses. Communities in newly electrified areas are also expected to experience an increase in land values.

Assumptions of the Access Project are listed below:

- The demand for electricity among unconnected households and firms is sufficiently high to justify the investment.
- Target beneficiaries see the value of electricity and are willing to pay for it, whether it is for residential or productive use.
- External actors provide complementary business development support to agricultural producers where it is needed.
- There is sufficient human capital to do interior wiring and maintain rural electrification infrastructure.

- Equipment dealers supply equipment and appliances in the target areas and expanded financing mechanisms become available to consumers to boost productive uses of electricity.

Risks identified for the Project specifically include:

- Senelec's Action Plan to reduce connection times is not implemented.
- Senelec's perimeter is not extended to areas that were formerly part of non-performing concessions as expected.
- Delay in the Project's final design (including the technical and/or environment components).

I.3.3 Project Power Sector Enabling Environment and Capacity Development Project (Reform Project)

The Reform Project addresses constraints related to the high cost, low access, and poor electricity service reliability. The Project is expected to strengthen major sector institutions, positioning them to be agents of change in the reduction of costs, improvement in reliability and quality, and extension of electricity access.

To achieve its **Objective**, the Project shall strengthen the laws, policies, and regulations governing Senegal's electricity sector, as well as the institutions responsible for implementing them, particularly the utility (Senelec), the regulator (the *Commission de Régulation du Secteur de l'Electricité* or CRSE), and the ministry responsible for energy and petroleum (Ministry of Petroleum and Energy or MPE). The timeframe for the achievement of Objective-level results is defined in Annex II where possible.

To support the Reform Project and the Program, the Government made several commitments to reform and strengthen the institutional and policy framework.[16] These are:

- Adopting and enacting the new electricity code as described in paragraph b) of annex V of the Compact.
- Establishing an instrument to monitor and provide financial incentives for Senelec's performance on key performance indicators.
- Developing and adopting the tariff plan in compliance with paragraph e) of annex V of the Compact.
- Ensuring the financial autonomy and provision of sufficient resources to CRSE and Senelec.
- Developing and adopting an integrated investment planning framework and conducting audits to ensure compliance with this framework.
- Ensuring long term-term financial sustainability of the sector in compliance with section 8.1 of the Compact, including, without limited to, adopting and observing the sector reimbursement and tariff plans.

[16] The exact language of conditions precedents and covenants can be found in the Compact and Program Implementation Agreement (PIA).

Beyond that, the Government committed, as part of the reform, to the:

- Final selection, before the Compact entry into force, of a sector alternative presented by the Road Map. The choice of this alternative was approved in December 2019.
- Adoption and initial payment as part of an electricity sector repayment plan before entry into force.
- Support to Senelec's ongoing orientation as a commercial entity, including the accounting unbundling of Senelec and ensuring the resolution of any related and outstanding audit findings before the start of the Reform Project activities.
- Development and adoption of the action plan to transpose to national law the ECOWAS gender mainstreaming in access to energy policy before the start of the Reform Project activities.
- Annual review of the road map implementation throughout the Compact, starting one year after the validation of the Road Map by the government. MCC will be invited to annual reviews.

The Reform Project builds on the participatory electricity sector planning process (the "Roadmap") supported by MCC under the Compact Development Funds (CDF) Agreement. Through the Roadmap, the Government has articulated and selected a long-term vision for Senegal's electricity sector, key features of which include an operational re-organization of the sector that allows for Senelec to become a public holding company, with separate and autonomous generation, transmission and distribution subsidiaries; a re-organization of sales and the off-grid system; a stronger enabling environment for the private sector participation in generation, transmission, distribution, and sales; and a complementary legal, institutional and regulatory framework. The Reform Project includes three activities: (1) sector governance, (2) regulator strengthening and (3) utility strengthening.

1) Sector Governance Activity

This Activity mainly addresses the high cost of electricity constraint. This includes the following (in each case where applicable, consistent with the Roadmap):

a) Technical assistance to restructure and update the legal and regulatory framework for implicated sector institutions in the sector consistent with the Roadmap, including the unbundling of Senelec into public subsidiaries, among which shall be an operationalized transmission system operator;

b) Support to the MPE and its entities for (1) the development, implementation, and monitoring of an integrated sector investment planning framework, (2) the development and implementation of a long-term plan to transition rural concessionaires to leaseholders (*affermages*), (3) the development and initial operationalization of a gender mainstreaming integration plan, (4) training and technical assistance to the institutions responsible for rural electrification to support business plan development, environmental compliance, and the roll-out of single phase technology and smart metering to support tariff harmonization, (5)

technical assistance to support preparation of the MPE's next sector policy letter (covering calendar years 2024-2028), and (6) technical assistance to support monitoring, and periodic assessments, of sector strategic action plans under the Roadmap; and

c) Support to facilitate increased private sector participation in the sector, including (1) development of an online *guichet unique*, serving as a "one-stop shop", for existing and new private companies seeking to invest in the sector, (2) technical assistance for market opportunity analysis, preparation of policy recommendations, and planning and transaction assistance for ancillary services (e.g., batteries, operating reserve, frequency regulation, etc.), (3) technical assistance to analyze the market for electricity to be opened directly between IPPs and large commercial or other consumers, and (4) development of a private sector participation/IPP solicitation framework to streamline the process for potential IPPs, as well as potential private sector participants in transmission.

This Activity is expected to improve sector planning, decrease prices in power purchase agreements, and increase private sector participation in generation and transmission with third-party network access, and in distribution with the *affermage* system projected by 2028.

Activities related to the improvement of the legal and sector framework are already ongoing with the GoS's adoption of the electricity code, which is a condition precedent to the Compact's entry into force.

2) Sector Regulator Strengthening Activity

This Activity aims to build and expand the capacity of CRSE to fulfil its statutory mandate, as described in the Roadmap and the new electricity code required under the Compact, as well as to meet new requirements in light of Senegal's expanding electricity sector. This includes:

a) Support to improve CRSE's core functions, including (1) technical assistance to conduct a grid audit, licensee assessments, and evaluations of regulatory effectiveness, (2) technical assistance to develop a monitoring and enforcement strategy, including evaluation of integrated sector investment plans and identification of available enforcement powers, (3) technical assistance to develop and implement a more effective organizational structure, (4) development of a multi-year communications plan, and (5) completion of a comprehensive salary and financial autonomy study for CRSE; and

b) Support to enable CRSE to meet new requirements and opportunities in light of changes adopted by the Government through the Roadmap, including technical assistance to (1) undertake and implement a comprehensive tariff reform study to assess the appropriateness of the current tariff methodology and financial and economic modeling for the sector, (2) perform a cost of service study, (3) develop recommendations on tariff rate design and the treatment of new sector assets (e.g., batteries), (4) develop and implement new regulations,

standard operating procedures, and templates (e.g., licenses, standard solicitation documents, *affermage* agreements, etc.), and (5) implement a communications campaign to share information about new tariff rates and outcome of studies.

The Regulator Strengthening Activity is expected to contribute to improved regulatory governance and substance, which will be measured by a regulatory assessment adapting the tools of the World Bank (*Evaluating Infrastructure Regulatory Systems)* and the African Development Bank *(Electricity Regulatory Index).* These outcomes could enable the energy sector regulator to better promote the financial viability of electricity sector companies and the protection of the consumers interests in terms of price, quality, and access to electricity. However, it will be difficult to credibly determine the Activity's effect on these latter outcomes.

The start date of sub-activities will be determined later.

3) Utility Strengthening Activity

This Activity aims to improve Senelec's commercial, financial, operational, and environmental performance. This includes:

a) Technical assistance to improve internal audit and control, procurement, financial management, and information services, including establishing, monitoring, and measuring technical, commercial, accounting, and financial management indicators, establishing business objectives, and overall performance monitoring and evaluation;

b) Establishing a utility performance incentive program, which is anticipated to include conditional disbursements to Senelec in the form of grants (funded by the GoS Contribution) if Senelec is able to satisfy identified key performance indicators (KPIs) (such as technical loss reductions, new connections, etc.). The incentive program shall be governed by an operations manual and related guidelines or agreements, each subject to MCC approval, setting forth the specific terms and conditions of the program, including but not limited to the identified KPIs and targets, the value of the conditional grants, permissible uses for the grants, and the role of CRSE or other sector institutions in the program;

c) Technical assistance to improve the management of Senelec's transmission and distribution network, including to (1) improve safety management, (2) train and orient new and/or young staff, (3) strengthen asset management capabilities, including the provision of, and training with, key equipment and materials, (4) centralize and upgrade the geospatial information system database, including technical assistance to utilize and manage the new system; and

d) Technical assistance to Senelec, as well as other relevant electricity sector stakeholders, to adopt and implement best practices for environment and social performance, including (1) preparation of key plans and documentation for assessing, monitoring, and evaluating

electricity projects, such as environmental and social management systems (ESMS), resettlement policy frameworks (RPF), and RAPs, (2) integration of improved health, safety, and environmental policies and practices, (3) managing and mitigating the impact of resettlement in project zones, and (3) provision of, and training with, key environment compliance monitoring equipment and tools.

The Utility Strengthening Activity is expected to improve the national utility's commercial, financial, operational and environment performance as measured by, for instance, reducing losses and the frequency and duration of service interruptions. Reductions in these technical indicators are intended to improve Senelec's operating-cost recovery ratio. Performance improvements in the use of spatial data, asset management, procurement, accounting, and financial management performance to reduce the life-cycle costs will contribute to the reduction of costs and the financial viability of the public utility.

The start date of implementation will be determined following the completion of design studies.

As mentioned previously, the **Reform Project Objective is to create an enabling environment to improve the financial viability of, and to ensure good governance in, the power sector, with the intent of improving the quality and quantity of the electricity supply.** This Objective statement agreed upon by MCC and the GoS counterparts during Compact negotiation does not lend itself to measurement through a single or even a couple of quantitative indicators. It includes broad concepts such as good governance. Additionally, instead of representing a single result for which all activities contribute, the Objective statement includes multiple steps in a causal chain. The enabling environment is meant to lead to improved financial viability, which in turn is meant to lead to the improved quality and quantity of electricity supply. Additionally, the Reform Project is logically connected to improving electricity quantity and quality, but its effect would be indirect, long term, and inseparable from other factors outside its control and influence.

Despite these challenges, it is important to clearly lay out how the Objective Statement (as articulated in Article 1 of the Compact) will be translated into measurable results. The table below provides an overview of how the objective's core concepts are defined and will be measured.

Table 1: Overview of definitions and measurement of concepts included in the Reform Project Objective

Concept	Definition / Results	Measurement
Enabling environment	Adoption of laws, policies, and strategic plans introduced by the Compact. These have diverse objectives, such as increasing private sector participation in the sector, improving sector planning, and improving service quality.	Mostly at the output-level with milestone date indicators for the adoption of new laws and policies[17].

[17] The extent to which policy adoption leads to implementation will also be assessed but is not included in the concept of 'enabling environment'.

Concept	Definition / Results	Measurement
Financial viability	The ability of electrical utilities to generate sufficient income to meet operating payments, debt commitments, and allow growth while maintaining service levels.	Financial performance indicators from utilities, including operating cost-recovery ratio (P-24).
Good governance	Refers primarily to improved sector planning, improved regulatory governance, and improved regulatory substance.	Sector planning will be independently assessed through a rubric that breaks down 'integrated investment planning' into results statements. Each statement is scored using a transparent scoring methodology. The totals are averaged to create a single score for the outcome.
		Regulatory governance and substance will be assessed through an independent regulatory assessment adapting the methodology described in the World Bank's Evaluating Infrastructure Regulatory Systems [18] . Scores on the African Development Bank's Electricity Regulatory Index (ERI) will also be used.
Quality of electricity	Refers to the duration and frequency of service interruptions and the occurrence of frequency and voltage fluctuations	A bi-annual phone survey will be conducted to obtain independent measures of these outcomes over time. However, due to the Project's long-term and indirect effect on these outcomes, it is uncertain that establishing a credible contribution story is feasible.[19] [20]
Quantity of electricity	Refers to the quantity of electricity in watt hours that is consumed by electricity customers.	Total electricity supply or sales are easily obtainable, but there is the same contribution issue as above. It is unlikely this indicator will be measured to assess the Reform Project.

Annex III of the Compact attempted to operationalize the Objective Statement through the following results: financial viability of the electricity sector, the quality of customer service, the reliability of electricity, and the quantity of electricity supplied. Based on further discussions, the Project team has re-worked the project logic to reframe the Objective Statement and identify a set of lower level, but still ambitious outcomes, which will be assessed to determine whether the Project met its Objective. This is portrayed in Figure 4's "key targeted results" column where the results are in beige. Most of these outcomes have a defined M&E strategy.

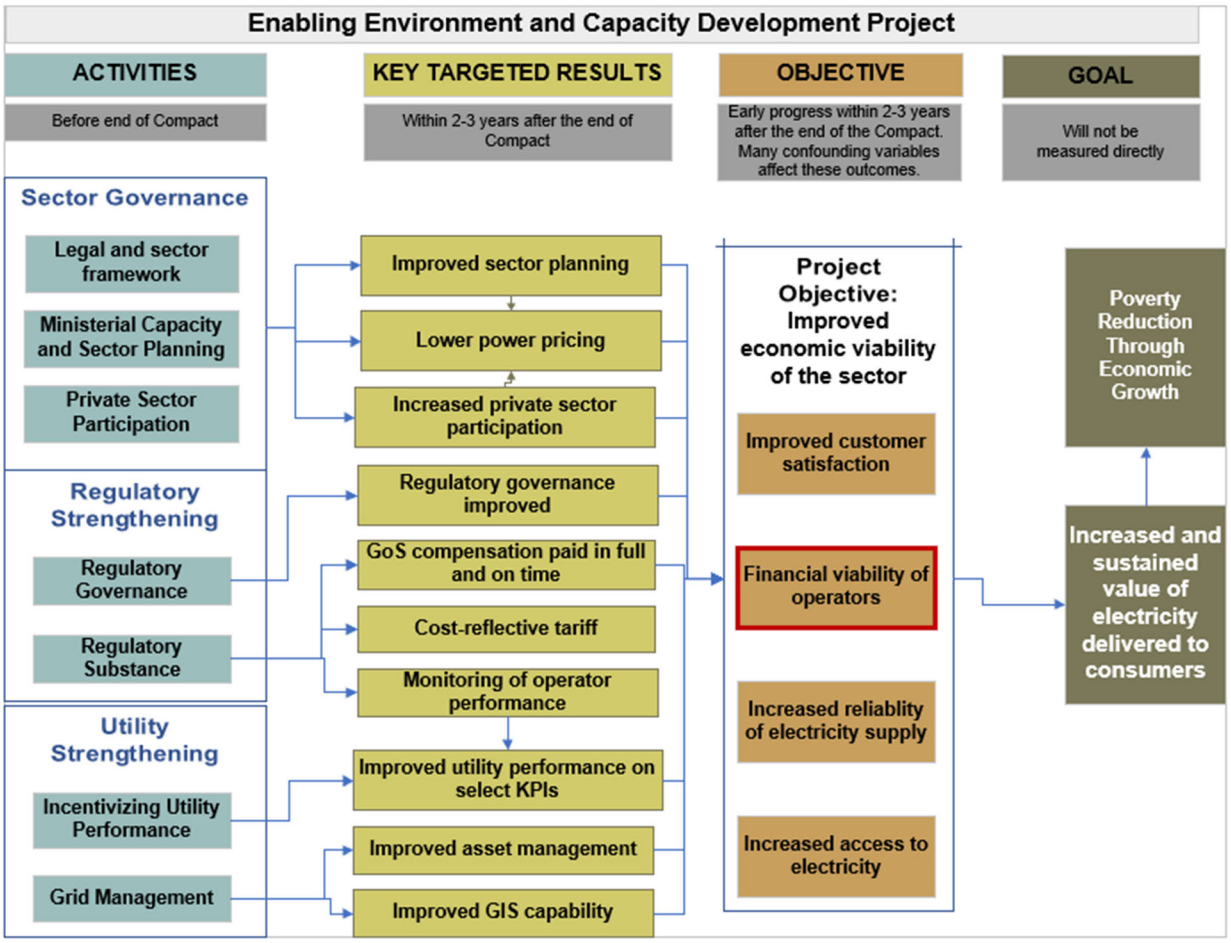
The diagram defines the Objective as the **improved economic viability of the sector**, a concept that includes three levels: the utility, the consumer, and the government. The Reform Project team preferred the term 'economic viability' instead of 'financial viability'. It includes the financial

[18] Brown, A., J. Stern, and B. Tennebaum. 2006. A Handbook for Evaluating Infrastructure Regulatory Systems. Washington, DC: World Bank.
[19] The term 'contribution story' comes from contribution analysis (Mayne, 2019), which is an approach to credibly describing an intervention's contribution to outcomes for which attribution is infeasible to determine.
[20] The 'Incentivizing Utility Performance' sub-activity may include service continuity as a payable key performance indicator. If that result is defined precisely and there is a credible third-party monitor, then the M&E team will be able to determine the Project's direct effect on changes in electricity quality.

health of electricity operators (financial viability), as well as the economic interests and well-being of electricity consumers and the fiscal burden of Government subsidies to the electricity sector. The M&E team will measure all outcomes under the Project Objective, while recognizing that the Reform Project's contribution in changing those outcomes may be difficult, if not, impossible to credibly assess. The exception is with financial viability of operators, which for instance, is expected to improve as a direct result of stronger regulatory actions and other Compact activities. However, regulatory actions aiming to improve service quality may have a negative short-term effect on the utility's finances.

Ultimately, it is expected that taken together the different activities and sub-activities will improve the sector's economic viability first at two levels: (1) improvement of customer satisfaction leading to new demand and (2) improvement of financial viability of operators that will be measured by, operating cost recovery ratio, operating cash flow ratio and net return on equity. The financial viability will lead to an increase in quality supply. The economic viability is expected to translate into a cost-reflective tariff as long as improved financial viability leads to reduced cost of service and increase of demand induced by the customer satisfaction. The induced demand constitutes additional revenue for the operator, which may positively influence its financial viability. This will entail a reduced level of required government compensation and an improved ability to pay its debts to operators (third level of economic viability).

Diagram 4: Reform Project Logic



Note: This project logic does not include the sub-activity on improving the sector's environmental and social performance. At the time of the Compact development and signature, MCA and MCC considered it to be a cross-cutting sub-activity that did not directly contribute to the Project Objective. The above diagram will be modified if this were to change. MCA will carry out a Strategic Environmental and Social Assessment which will address the matter of how improving the sector's environmental and social performance contributes to the Reform Project Logic.

Annex IV includes more detailed project logics for each sub-activity showing how processes, outputs, and intermediary outcomes lead to the 'key targeted results' and Objective described above. These logics also highlight some differences in MCC's and MCA's perspectives on what the Reform Project is expected to achieve. The logics may be revised during implementation. They may also serve as the basis for periodic discussion on the team's understanding of the problems it aims to address and its strategy for doing so. More information on this approach is included in the 'Beyond Performance Monitoring' section of this M&E Plan's Monitoring Component section.

The known assumptions for the Reform Project are set out in the list below:

- Fuel prices do not increase too much. This would apply an upward pressure on the tariff and affect the government's commitment toward difficult reforms.
- Relatively strong economic growth and favorable macro-economic conditions persist.

- Changes in leadership of public and quasi-public organizations are minimal and do not harm commitment to reform.
- Organizational actors perceiving reforms to be against their interest do not stall the Project's implementation.
- Staff at the MPE, CRSE, and Senelechave the desire to make sector improvements and participate in Compact activities.
- Quantity and quality of staff at MPE, CRSE, and Senelec can participate in Compact activities and sustain outcomes realized during the Compact.

The known risks for the Reform Project are set out in the list below:

Sector Governance

- Non-implementation of new provisions of the electricity code aligned with Compact objectives.
- Significant disagreements with stipulations proposed in the Electricity Code make for a difficult relationship with other donors.
- There are significant disagreements with details in the application texts of the integrated investment planning framework, leading to delays and low quality of deliverables.
- Lack of coordination with the World Bank on utility restructuring (accounting unbundling, functional unbundling, etc.) activities.
- Reform Technical Advisory (TA) budget is insufficient due to the potentially growing complexity of the Activity.
- Lack of coordination with the Reform TA results given that consultant will not permanently be based in Senegal.
- The TA provider to MPE is charged with too many disparate tasks, reducing the quality of deliverables and support.
- Training needs continue to change, making it difficult to contract resources to provide training to personnel within the MPE and its agencies.
- *Guichet unique* design does not rise to the level of a high caliber web site and portal, losing its ability to attract viewers and be of value.
- Coordination with donors on critical sector-wide interventions is not made effectively.
- Sector stakeholders challenge newly granted powers to the regulator.
- Personnel at the regulator or one or more commissioners disagree or remain quietly unsupportive of new responsibilities accorded to CRSE by the changes in law.
- Tariff plan is not followed over the course of Compact implementation.
- Coordination and synchronization between laws and communications/change management not made.
- Consultants procured for activity support fail to deliver on time and/or with quality.
- The strength and quality of the relationship between MPE and the TA Provider to MPE erodes over time.
- Other events and studies outside of the Compact but complementary to legal and sectoral work (e.g., Grid Code, Third-Party Access) are delayed.

- Regional institutional changes (e.g., ECOWAS Regional Electricity Regulatory Authority [ERERA]) impact national laws proposed or in the process of being drafted.
- Weaknesses of the regulatory and institutional framework of the energy sector that does not attract the private sector.
- Delay in the arrival of gas in the energy mix, maintaining tariffs relatively high.
- Incentives for improved performance dissipate after the Compact ends.
- Staff trained as part of Compact-funded activities might leave their organizations.
- Processes for institutionalizing new knowledge are not implemented in the MPE, CRSE, or Senelec. There is no plan for training newly hired staff.
- The wrong people are trained and thus cannot apply their training immediately to the appropriate and relevant role.
- The strength and quality of the relationship between MPE and the embedded TA erodes over time.

Regulatory Strengthening

- New regulations proposed or communicated by the regulator are challenged or hindered by sector stakeholders.
- Regulator delays issuing (or does not issue at all) official decisions previously drafted by consultants.
- Recommendations on regulatory organizational changes are not instituted and made effective.
- Significant changes in personnel at CRSE erode the capacity to implement and further progress on Activity components.
- Financial autonomy study recommendations are challenged by the various stakeholders capable of supporting the regulator's autonomy.
- Grid audit recommendations are not further incorporated into regulations.
- Tariff plan and sector repayment plan are not monitored over the course of Compact implementation.
- Coordination and synchronization between regulations and communications/change management are not done.
- Consultants procured for various activities fail to deliver on time and/or with quality.
- The strength and quality of the relationship between CRSE and the embedded TA erodes over time.
- Roadmap action plan veers off course, impacting timing and planning around release of new regulations.
- Other events and studies complementary to regulations (e.g., unbundling, ATR), either stemming from within the Project or external to the Compact, are delayed.
- Delays with external studies with which the Activity has dependencies negatively impact the expected outcomes of the Activity.
- Regional institutional changes (e.g., ECOWAS Regional Electricity Regulatory Authority [ERERA]) impact national laws proposed or in the process of being drafted.

Utility Strengthening

- Performance incentive grants end up going to the wrong actors who played no part in performance improvements, demoralizing the real change makers.
- Data is manipulated to receive performance incentive grants.
- An inability to manage the myriad number of dependencies amongst Compact-funded contracts and activities lead to schedule delays, low quality of deliverables, and unrealized outcomes.
- There is difficulty of behavior change and buy in from key stakeholders for a reform intervention.

I.4 Projected Economic Benefits

During the third phase of project development, the Government of Senegal and MCC conducted an economic analysis for each project to determine the cost-benefit ratio of expected investments. Such economic analysis of the Program consisted of a CBA, which resulted in an estimated ERR, and an analysis of beneficiaries. In compliance with MCC policy requirements, projects had to meet the minimal return rate criterion of 10% to be accepted. The results of the ERR of projects and activities are presented in the following table**:**

Table 2: Summary of the economic rate of return

Project	Original ERR	Date of the initial ERR	Current ERR	Date of the current ERR
Compact	**30%**	**09/2018**	**24%**	**07/2021**
Transmission Project	**33%**	**09/2018**	**25%**	**07/2021**
Activity 1: Dakar Transmission Activity[21]	30%	09/2018	21%	**07/2021**
Activity 2: Transformers - Rehabilitation Activity	73%	09/2018	50%	**07/2021**
Activity 3: Grid Stabilization Activity	17%	09/2018	17%	**07/2021**
Access Project	**17%**	**09/2018**	**17%**	**07/2021**
Activity 1: Supply side Infrastructure Activity (combined with Demand Support Activity sub-activities: Supporting	6%	09/2018	6%	07/2021

[21] The economic analysis of the activity for the development of the transmission network around Dakar was reviewed in 2021 before the Compact entry into force with the assumption that only 14 (instead of 20) substations should be used to estimate benefits. However, when this issue was first identified in mid-2020, MCC's due diligence consultants considered that only 10 substations should be used to estimate benefits. It was only later in mid-2021 that the team determined an additional four additional stations should be included as they also serve the Dakar peninsula. This was considered to include all transformers stations that inject electricity onto the distribution network in the Dakar peninsula. The ERR revision also reflects the reallocation of the Management Oversight Social and Environmental Support (MOSES) costs to the three activities of the Transmission Project. This reallocation, taken alone, reduced the ERR of activity 2 and increased the ERR of activities 1 and 3.

Project	Original ERR	Date of the initial ERR	Current ERR	Date of the current ERR
Connections and Market Facilitation for Equipment Access)				
Activity 2: Consumer Demand Support Activity (sub-activity Education Campaign)	20%	09/2018	20%	07/2021
Activity 3: Distribution Network Reinforcement Activity	47%	09/2018	47%	07/2021
Reform Project	**18%**	**09/2018**	**18%**	**07/2021**

I.4.1 Economic Analysis of the Transmission Project

The global ERR of the Transmission Project is estimated at 25% and its net present value (NPV), at a discount rate of 10%, is estimated at $712 million. The Transmission Network Development Activity and the Transformers Replacement Activity increase the capacity of the transmission network specifically in Dakar through addition of new 225 kV cables and increase of transformers and substations capacity. These investments reduce transmission constraints during hours of peak demand and enable the provision of additional power to consumers. The economic benefit stream of the Transmission Project is measured through determination of the value of benefits related to consumption of such additional power. The quantity of the additional power transmitted attributable to the Project was estimated via a load flow model of the transmission network, considering the location and sizes of stations, specification of the network and the temporal and spatial profile of the power demand with the review of the economic model in 20 years. The value (in terms of well-being) of the additional power transmitted is estimated using the difference between the average willingness to pay as estimated by a 2018 willingness to pay study and the economically efficient power tariff that would enable Senelec recover its cost of service.

A crucial aspect of the ERR at the project level is that it relies on assumptions of the status quo of policies and institutional reforms as the basis for modeling the additional power transmitted attributable to the project infrastructure investments. If that was not the case, it would probably lead to a certain double counting of benefits between the transmission and reform projects. A key assumption of economic models is that operation and maintenance expenditure lead to a sufficiently effective implementation of activities, which enable to prevent the additional power transmitted by the network from deteriorating over time. In compliance with the logic of the Transmission Project, economic models capture the global benefits of a package of investments in the capacity and stability of the transmission grid in terms of incremental energy supplied to consumers.

The sensitivity analysis reveals that the Transmission Project ERR is particularly sensitive to the value of the incremental energy based on willingness to pay, overruns of investments costs, and the level of operation and maintenance costs.

I.4.2 Economic Analysis of the Access Project

The overall ERR of the Access Project is estimated at 17% and its NPV at a 10% discount rate is estimated at $33.5 million. The aggregate ERR includes benefit streams from all three activities and their respective sub-activities.

Key factors for the stability of this overall ERR are assumptions regarding the adoption rate for productive electricity use as well as the estimated cost of electricity production using gasoline powered generation units. While the assumptions regarding the productive use take up rate are based on detailed assessments as well as assumptions regarding the impact of the Consumer Demand Support Activity, the cost of electricity generation using gasoline powered generators can be sensitive to international oil prices. To mitigate these assumptions, MCC conducted simulations across both one and two standard deviations from the mean of the two variables to gauge the sensitivity of Project-level (as well as the disaggregated ERRs) to these factors. As previously stated, the Supply Side Infrastructure Activity has two key benefit streams: increased land values for households and firms' energy cost savings.

At this stage, the single source benefit stream for the Consumer Demand Support Activity is the reduction in energy consumption by currently connected households due to adoption of efficient lighting.[22] Only this single source benefit stream has been identified at this time because the details of the regional aspects of this Activity will be further elaborated during initial implementation. MCC and the Government will periodically revise available ERR information based on new Project design parameters.

The key benefit stream of the Distribution Network Reinforcement Activity is the economic value of the non-distributed energy, which is set at $2.48 per kWh, as well as the economic values of distribution losses, set at $0.097 per kWh. The Activity aims to reduce non-distributed energy and technical losses.

I.4.3 Economic Analysis of the Reform Project

The global ERR of the Reform Project is estimated at 18% and its NPV, at a discount rate of 10%, is estimated at $39.7 million. The three activities of the Project support the reforms conducted by various sector players and investments in capacity building of these entities.

The economic analysis of the Reform Project relies on empirical data resulting from a systematic review of impacts of the electricity sector reforms in developing countries. MCC and the

[22] This is measured by estimating total electricity bill savings if all electrified households retrofitted existing 40W incandescent lightbulbs with 6W LED lights, assuming (i) 10 percent of households already use LED, (ii) a 2 percent growth rate in adoption per year, and (3) that an average household uses 5 hours of lighting per day. However, as the scope of this sub-activity is changing the economic analysis will need to be revisited.

Government specifically built on the experience of countries in terms of reforms of the electricity sector to select studies that meet three criteria:

- The extent and scope of reforms relevant to those considered as part of the Compact.
- A sufficiently inclusive coverage of the country to present broad relevance for the study methodology in Senegal.
- Studies sufficiently rigorous to generate credible estimates and with an internal validity of reform impacts.

In total, this review retained seven[23] studies on several countries covering five major categories of reforms and providing twelve parametric estimates of impacts of reforms. The table below presents reforms and impact variables which the seven studies focus on as well as the benefits that depend on them.

Table 3: Summary of types of reforms and associated impact variables reviewed in studies on the power sector reform which projects ERR are based on

Impact variables / *Reforms*	Transmission and distribution losses	Duration of interruptions	Frequency of interruptions	Power generation per inhabitant	Access
Regulations					
Restructuring	X				X
Competition				X	
Private sector participation	X	X	X	X	
Reform combination	X			X	

Note: X means that that analysis includes one or several studies assessing the impact of a given reform on a specific impact variable and providing estimates of the associated parameters.

The timing of some reforms included in the analysis highlights a key risk of the Reform Project, and a risk to which the economic returns are sensitive. Namely, some reforms, such as the creation of the *affermages*, are expected to both be initiated and produce impacts only after the expiration of the Compact term. This is one example of the higher inherent risks typical of such reform programs; at the same time, such programs often offer prospects of greater and more sustainable returns.

The Reform Project ERR has characterized the content of the Program's proposed reforms in some detail and assessed the prospects for an economically viable project using available cross-country evidence. The Project's ERR estimate rests on four types of benefits: a reduction in transmission

[23] Urpelainen, Yang, & Liu (2018:11)
Zhang, Parker, and Kirkpatrick. 2008. Four-component regulatory index
Zhang, Parker, and Kirkpatrick. 2008. Competition index
Bacon, Robert (2018), Impact of Power Utility Reform in Developing Countries: A Literature Review. Washington, DC: The World Bank, Energy & Extractives Global Practice

and distribution losses, a reduction in the duration and frequency of interruptions, an increase in electricity generation per capita, and an increase in electricity access. What is more challenging to evaluate on an objective basis and with confidence is the prospect of success of certain reforms—particularly those more distant in time, after expiration of the Compact term—as a function of institutional and political context in Senegal. Sensitivity analysis can be helpful in identifying those parameters in the model to which returns are most sensitive. In this case, the Reform Project's returns are sensitive to the timing of reforms, parameters connecting reform progress to key sectoral outputs and outcomes, the efficacy of reform implementation, and the value of incremental energy attributable to successful reforms.

Sensitivity analysis of the Reform Project ERR indicates that this ERR estimate is most sensitive to the value of incremental energy, to Senelec's efficiency in carrying out reforms, and to the impact of regulatory, structural, and competitive reforms on transmission and distribution losses. The estimated probability that the Reform Project ERR exceeds ten percent is 66 percent.

Consistent with the Project's program logic, the economic model aims to capture the combined benefits of a range of investments in sectoral reforms and of the development of capacity and expertise that underpins these reforms. In compliance with the logic of the project, the purpose of the economic model is to account for global benefits of a package of investments in sector reforms as well as capacity building and skills that underlie such reforms.

I.5 Expected Program Beneficiaries

According to the *MCC Guidelines for Economic and Beneficiary Analysis*, beneficiaries of projects are considered individuals that are expected to experience better standards of living due to Compact activities aimed to increase their real incomes. The ERR analysis for proposed projects gives details on benefit streams through which beneficiaries should experience increased incomes.

A general overview of the span of program benefits across the population of Senegal, used for Compact justification to MCC's Investment Committee, is presented in the table below.

Table 4: Expected Program Participants

Project	Definition of Program Participants	Established Number of Program Participants
Transmission Project	Senelec, DEEC, Dakar municipal governments	TBD
Access Project	ASER, Senelec, DEEC, Concessionaires of target areas, Regional and departmental governments in target areas	TBD
Reform Project	MPE, CRSE, Senelec, ASER, APIX, IPPs, Consumer association, FSE, DEEC, Ministry of Finance, Presidency, Rural concessionaires, ERILs	TBD

Table 5: Expected Program Beneficiaries

Project	Definition of Program Beneficiaries	Estimated Number of Beneficiaries	Present Value (PV) of Benefits ($m)	Net Present Value (NPV)[24] ($m)
Transmission Project	Electricity users (households and businesses) in the targeted geographic zones	4,600,000[25]	1,140	742
Access Project	Electricity users in rural areas	181,000	92.6	31.0
Reform Project	Electricity users	12,600,000	79.8	38.4
Program total	(Note: some people benefit from several projects)	12,781,000	1,320	811

The Program is expected to benefit, based on projections, a total of 12,781,800 persons, as indicated in the detailed Table 5 above with 6,300,000 beneficiaries defined as "poor" (out of which 2.1 million are considered as "extremely poor" and 4,100,000 as "almost poor"[26]).

I.5.1 Analysis of the Transmission Project Beneficiaries

The Transmission Project beneficiaries include all electricity users in the project investment areas. There are estimated at 4,600,000 users, as mentioned in Table 5 above and corresponding to households and businesses. Regarding businesses, over 90% are in the informal sector (RGE[27], 2017). Thus, the Project is expected to generate a significant impact in the productivity of businesses, thereby contributing to the economic growth. Given that the Transmission Project may affect electricity flows throughout Senegal's interconnected network, all consumers connected to the network may benefit to some extent. The economic analysis is limited to beneficiaries in the Dakar peninsula, however, since according to MCC analysis, it is in that region that effects are most clearly attributable to the Project.

I.5.2 Analysis of the Access Project Beneficiaries

The Access Project will contribute to the development of new and the strengthening of existing income-generating activities, and the beneficiaries will be mainly households and firms in the access project intervention areas. Project intervention areas were selected based on the potential for beneficiaries to adopt incoming-generating activities within agricultural value chains. In addition, people in neighboring villages might also become beneficiaries, due to potentially

[24] The NPV illustrates the net benefits, which subtract the discounted costs from the discounted benefits. The Cost-benefit analysis produces two main outputs: the ERR and NPV. This provides a more complete picture and allows for comparisons at this level across projects.

[25] The reduction (for economic modeling purposes) in the Transmission Project's anticipated geographic footprint suggests a concomitant reduction in the estimated number of beneficiaries that is not yet reflected here. MCC will use Senelec customer data to generate a revised estimate.

[26] These categories of beneficiaries are defined based on the following daily consumption levels (in dollars PPA 2011): extremely poor: less than 1.90 dollar; poor: 3.20 dollars; and almost poor: between 3.20 and 5.50 dollars.

[27] General census of business

increased opportunities for off-farm income-generating activities and access to electrified community infrastructure, such as mills, water pumps, etc.

I.5.3 Analysis of the Reform Project Beneficiaries

The beneficiaries of the Reform Project are expected to include all electricity users but also electricity utilities, be it Senelec or other rural electrification operators. Through satisfaction of consumers, beneficiaries will be rural and urban consumers. As previously described, even though the main beneficiaries in the economic analysis are the electricity consumers, the main impacts will specifically be analyzed at the level of actions and performance of players of the sector.

II. Monitoring Component

II.1 Summary of the Monitoring Strategy

The Compact will be monitored systematically, and progress reported regularly through the Indicator Tracking Table (ITT). There are four levels of indicators that follow from the program logic framework: (i) process; (ii) output; (iii) impact; and (iv) goal. The various indicator levels map to the program logic and thus allow Project developers and managers to understand to what extent planned activities are likely to achieve their intended objectives. Often most outcome and goal indicators are not monitored during the life of the Compact, but rather are reported through evaluations after the Compact is complete. Those levels of results typically take longer to be achieved.

Monitoring data will be analyzed regularly to allow managers of MCA-Senegal II and MCC to make programmatic adjustments as necessary with a view towards improving the overall implementation and results of the Program.

Goal indicators measure the economic growth and poverty reduction that occur during or, most likely, after implementation of the program. For MCC Compacts, goal indicators will typically be a direct estimate of local income and are typically measured through post-Compact evaluations. Outcome indicators measure the intermediate effects of an Activity or set of Activities and are directly related through the program logic to the output indicators. Output indicators directly measure Project Activities. They describe and quantify the goods and services produced directly by the implementation of an Activity. Process indicators measure progress toward the completion of Project Activities. They are a precondition for the achievement of output indicators and a mean to ascertain that the work plan is proceeding on time.[28]

MCC has introduced common indicators for external reporting across all MCC Compacts. The common indicators relevant to the Senegal Power Compact are included in this M&E Plan. They include, for instance, the number of kilometers of transmission lines upgraded or built (P-6).

[28] The indicator levels are formally defined in MCC's Policy for Monitoring and Evaluation of Compacts and Threshold Programs.

The Compact outlines the initial indicators for the Program. The M&E Plan builds on this information with additional indicators developed by MCC, MCA-Senegal II project managers and implementing entities in the early stage of project implementation.

The Indicator Definition Table provides relevant details for each indicator by Project and can be found in Annex I. It provides descriptions for the indicator structure by specifying each indicator's: (i) name; (ii) definition; (iii) unit of measurement; (iv) level of disaggregation; (v) data source; (vi) responsible party; and (vii) frequency of reporting.

To ensure that the Program is on track to meet its overall goals and objectives, the monitoring indicators will be measured against established baselines and targets, derived from ex-ante economic rate of return analysis, other types of analysis, and project planning documents. The targets reflect the underlying assumptions made in program design that each activity will likely achieve. Baselines and target levels for each indicator are defined in Annex II.

Indicators may need to be modified in future versions of the M&E Plan. Modification and revisions to the indicators may only be made according to the MCC M&E Policy. Any significant modifications to the indicators or other content will be summarized in Annex III of the M&E Plan.

The definition, basic and target values for some indicators are still to be determined. Most of the remaining information will be determined when relevant activities will be better defined with the implementation of feasibility and design studies, as well as with the development of work plans following the signature of implementation contracts.

The MCA-Senegal II M&E team shall consult and assist implementing entities in setting up their data collection plan and reporting templates.

II.2 Beyond Performance Monitoring

Traditional monitoring is focused on predetermined activities and results to assess implementation progress and expected outcomes as described above. This approach is particularly valuable when the intervention can be defined quantitatively (e.g., length of distribution lines constructed) and is unlikely to change. It allows project managers at any given time to know the extent to which implementation is meeting predetermined benchmarks for progress.

This monitoring approach has limitations. It can emphasize accountability toward predetermined activities over within-project learning and is more responsive to reporting requirements than to program needs. Performance indicators that map results in the project logics are often insufficiently operational and timely to be useful to project managers. The focus on activities and results defined during project design is not well-suited for dynamic projects and can even constrain iteration and adaptation that is necessary to achieve the Project Objective. Finally, this monitoring alone is not able to explain the key factors enabling or hindering the achievement of outcomes, especially those that are outside the project's sphere of influence or control.

The MCA-Senegal II M&E team will pilot monitoring approaches to address these limitations. Drawing from existing approaches, the MCA-Senegal II M&E team will develop its own approach within the first year of the Compact. Some of the expected principles and features include:

- **Informative for decision-making.** Inquiry should be structured to better understand the problem that the project is seeking to address, generate lessons learned from implementation, and facilitate strategic adjustments to previous plans. It should be timely and relevant for project implementers. Best practices in facilitation should be used to help diverse individuals build collective understandings from the data and to guide those actors toward action.
- **Attentive to the context.** Context refers to the 'critical conditions required to facilitate the implementation and produce the effects' (Rey, 2011). They are the problems in the problem tree that project does not seek to influence (Renger et al., 2015).
- **Documentation.** The team's understanding of the problem, the context, and its strategic approach will evolve over time. Documenting these changes ensures that project meetings are building off one another with a common understanding of the project's evolution. Documentation also helps future independent evaluators understand what was implemented and how.
- **Close collaboration between implementers and the M&E team.** This approach blurs the line between implementers and M&E staff as data feeds into real-time decision-making. Data collection would be a shared responsibility among staff, and M&E would not be impartial and independent.
- **Evaluative thinking.** The data collection is a continuous process done by a variety of individuals, including MCA staff. Project staff are encouraged to question assumptions, pose thoughtful questions, and pursue deeper understanding through reflection and perspective taking, and inform decisions in preparation for action. (Buckley, J. et al., 2015). Project staff should also be open, alert, and inquisitive (Chambers, 2015).
- **Plural perspectives and multi-stakeholder analysis.** Data should reflect a variety of perspectives, not only those of implementation teams and individuals in formal authority positions, but individuals working in the sector at lower levels of the organizational hierarchy, citizens, and individuals with independent perspectives such as journalists, community leaders, or activists. The perspective of women, men, youth and poorer populations should all be incorporated. The process of analyzing and using data should be inclusive of diverse stakeholders to the extent it is feasible.
- **Plural methodology and methods.** This approach to monitoring does not favor any specific methodology or method but should incorporate those that are most useful. Data should be of diverse sources. Qualitative data sources include implementation reports, press articles, interviews, direct observations, or videos. Quantitative data includes administrative data from electricity operators and high-frequency survey data. Furthermore, there should be diversity in who is collecting data. It is not the exclusive job of impartial and external consultants to collect data. Project implementers and even project participants should be involved in data collection.

II.3 Data Quality Review

Data quality is the primary responsibility of the MCA-Senegal II personnel, under the supervision of the M&E and EA team. The M&E team, other MCA staff, as appropriate, and implementing entities are expected to regularly check data quality. The M&E team should verify that all reported data has appropriate source of documentation and calculations have been done correctly. The MCA-Senegal II M&E team will conduct field visits on a regular basis or whenever requested by MCC, to review the quality of the data gathered through this M&E Plan. MCA-Senegal II may hire individual data quality reviewers to control data collection and quality, as needed.

In addition to regular data quality checks by MCA staff, independent Data Quality Reviews (DQRs) will be conducted in accordance with the requirements of the MCC M&E Policy.

The objectives of Data Quality Review (DQR) studies are to assess the extent to which data meets the standards defined in the MCC M&E Policy in the areas of validity, reliability, timeliness, precision, and integrity. DQRs will be used to verify the consistency and quality of data over time across implementing agencies and other reporting institutions. DQRs will also serve to identify where the highest level of data quality is not possible, given the realities of data collection.

The particular objectives for the DQR will include identification of the following parameters: i) what proportion of the data has quality problems (completeness, conformity, consistency, accuracy, duplication, integrity); ii) which of the records in the dataset are of unacceptably low quality; iii) what are the most predominant data quality problems within each indicator; iv) what are the main reasons behind low quality; and v) what steps can be taken to improve data quality.

MCA-Senegal II conducted a data quality review between January 2020 and April 2021. It reviewed the quality of studies, surveys, and administrative data by assessing, on the one hand, the quality of their preparation process (design, sampling, drafting of questionnaires, planning of works) and, on the other hand, the collection, processing, analysis and dissemination and/or publication of results of data related to indicators of the Senegal Power Compact.

The study identified shortcomings in M&E skills of personnel and data systems of the entities responsible for reporting against the Compact's indicators. The proposed recommendations are to (1) strengthen processes, formats, and models, (2) develop M&E capacities, and (3) strengthen equipment, systems, and infrastructure. The recommendations that MCA-Senegal II will support have not yet been determined but a stakeholder engagement process is ongoing.

MCA-Senegal II will contract an independent consultant for another data quality review in compliance with MCC Program Procurement Guidelines. The entity responsible for data quality reviews should be hired in the third year of the Compact.

II.4 Standard Reporting Requirements

Monitoring reports will be periodically generated for MCC and stakeholders. These include:

Reporting to MCC: Quarterly Disbursement Request Package

Performance reports serve as a vehicle by which the MCA management informs MCC of implementation progress and on-going revisions to project work plans. Currently, MCC requires that MCA submit a Quarterly Disbursement Request Package (QDRP). The QDRP must contain an updated ITT and a narrative report. A complete ITT presents the preceding quarters' indicator actuals and current quarter indicator progress against targets set forth in this M&E Plan. The ITT is the source for MCC's internal and external reporting on indicator progress.

Additional guidance on reporting is contained in MCC's *Guidance on Quarterly MCA Disbursement Request and Reporting Package*.

Reporting to MCA and Local Stakeholders

Even though the QDRP is required to be sent to MCC, MCA is also expected to use these reports and the data included in them to internally assess progress and performance. The M&E teams attempt to align MCC and MCA reporting so that data is used to inform decision-making at both levels.

Reporting to MCA- Senegal II Board of Directors

The M&E team will submit performance reports to MCA-Senegal II Board of Directors on a quarterly basis. These reports will be on implementation progress and results. Reports will include the ITT and other documents that will help describe the progress toward the Compact objectives. These updates may include recommendations on implementation for MCA-Senegal II Board consideration.

III. Evaluation Component

III.1 Summary of the Evaluation Strategy

While good program monitoring is necessary for program management, it is not sufficient for assessing ultimate results. Therefore, MCC and MCA-Senegal II will use evaluation as a complementary tool to better understand the effectiveness of its programs. As defined in the MCC M&E Policy, evaluation is the objective and systematic assessment of a program's design, implementation, and results.

The Policy indicates that every Project in a Compact must undergo a comprehensive evaluation (impact and/or performance) that is designed and implemented by independent, third-party evaluators hired by MCC. If the MCA-Senegal II wishes to engage an evaluator, the engagement will be subject to the prior written approval of MCC. Contract terms must ensure non-biased findings and publication of results.

MCC and MCA-Senegal II are committed to ensuring that the independent evaluations are as rigorous as warranted in order to understand the causal impacts of the program on the expected outcomes and to assess cost-effectiveness. The next section on Specific Independent Evaluation Plans will describe the purpose, methodology, timeline, and the process for data collection and analysis for each independent evaluation.

MCA-Senegal II and relevant stakeholders are expected to review and provide feedback to independent evaluators on the evaluation design reports, evaluation materials (including questionnaires), baseline report (if applicable), and any interim/final reports to ensure proposed evaluation activities are feasible and relevant, and final evaluation products are technically and factually accurate. MCC's evaluation review process will follow the guidelines outlined in the MCC M&E Policy. The results of all evaluations will be made publicly available in accordance with the MCC M&E Policy.

III.2 Specific independent evaluation plans

III.2.1 Summary of Specific Independent Evaluation Plans

The following table summarizes specific evaluation plans.

Table 6: Summary of specific independent evaluation plans

Evaluation Name	Evaluation Type	Evaluator	Primary/ Secondary Methodology	Final Report Date
Transmission Project Evaluation	Performance	TBD	TBD	TBD
Access Project Evaluation	Performance and Impact	TBD	TBD	TBD
Reform Project Evaluation	Performance	TBD	TBD	TBD

The evaluation types and methodologies above are subject to change during the evaluation design phase after evaluators are hired. MCC does not rule out the possibility of conducting an impact evaluation of parts of the Reform and Transmission Projects.

III.2.2 Transmission Project Evaluation

Evaluation Questions

The evaluation questions, methodology, and data sources will be determined during the evaluation design phase after MCC contracts the Independent Evaluator. The evaluation questions and related indicators as defined in Annex III of the Compact are included in the table below. MCC and MCA will revise the evaluation questions when developing the evaluation SOW. Taken together, the evaluation questions will reflect and be guided by the following three questions:

1. Was the project implemented according to plan (in terms of quantity and quality of outputs)?
2. Did the project achieve its targeted outcomes, particularly its stated objective, in the timeframe and magnitude expected? Why or why not?
3. Do the results of the project justify the allocation of resources towards it?

Table 7: Evaluation Questions and Indicators of the Transmission Project

Evaluation Questions	Indicators
What changes (if applicable) did the project bring to the network reliability, stability, and efficiency?	Non distributed energy, power injection of PP into the transmission power network average duration of service interruptions, average frequency of service interruptions, technical losses.
What are the impacts (if applicable) of theTransmission Network Build-out Activity on the quantity of electricity distributed in the Dakar agglomeration? Were the project assumptions related to the extension of the electricity supply and distribution network, used to justify the reasonable or implemented investment?	Electricity supply
Did the project influence decisions of the private sector to invest in major industrial projects and in the electricity generation in Senegal?	Private sector participation in the electricity generation[29] and in the industrial sector (mine and metal industries), major industries, and big loads (data centers, etc.) connected directly to the HV network
Did the project increase the quantity of electricity distributed from the renewable energy sources?	(P-21) Share of renewable energy in the country, share of renewables in the electricity supply, use of renewable energy power stations.
Did the project reduce the electricity generation costs?	Generation cost
Did the project improve public utilities costs recovery?	(P-24) Operation cost-recovery ratio, quasi-fiscal deficit[30]
Did the per capita power consumption increase in the project areas?	Electricity supply, electricity demand satisfied, electricity sales
What changes (if applicable) did the project bring to the level and composition of energy expenses of consumers connected to the network?	Energy expenses of businesses and households
What are the impacts (if applicable) of the project on generation costs and productivity of businesses?	Generation costs, business productivity

Description of the Evaluation Methodology

The evaluation design will be determined after MCC contracts the Independent Evaluator.

[29] This indicator is currently included in the reform project, but not in the transmission project.
[30] These two indicators are currently included in the reform project, but not in the transmission project.

Data Sources

The data sources will be determined after MCC contracts the Independent Evaluator.

III.2.3 Access Project Evaluation

Evaluation Questions

The evaluation questions, methodology, and data sources will be determined during the evaluation design phase after MCC contracts the Independent Evaluator. The evaluation questions and related indicators as defined in Annex III of the Compact are included in the table below. MCC and MCA will revise the evaluation questions when developing the evaluation SOW. Taken together, the evaluation questions will reflect and be guided by the following three questions:

1. Was the project implemented according to plan (in terms of quantity and quality of outputs)?
2. Did the project achieve its targeted outcomes, particularly its stated objective, in the timeframe and magnitude expected? Why or why not?
3. Do the results of the project justify the allocation of resources towards it?

Table 8: Evaluation Questions and Indicators of the Access Project

Evaluation Questions	Indicators
To what extent did the following variables affect the connection tariff and power consumption? Being a beneficiary of the information education campaign Understanding the connection process Understanding how electricity can be used for productive purposes Primary source of household income Distance from nearest household connection Distance from the grid or transformer Service interruptions Quality of customer service Income level, regularity, and predictability Socio-economic characteristics such as household size	(P-25) percentage of households connected to the national grid Electricity consumption in MCC investment areas
How did the number of customers connected to the grid change as a result of the Project?	(P-25) percentage of households connected to the national grid
Did electricity consumption per capita in target areas increase as a result of the Project? How much of this increase (if observed) was for productive uses?	Electricity consumption in MCC investment areas Productive use of electricity
Was new electricity consumption associated with a decrease in overall energy expenditures? Were energy consumption levels associated with the scale of savings?	Energy expenses
How did connection rates and electricity consumptions levels evolve in the intervention areas in the five years following the construction of distribution lines?	(P-25) percentage of households connected to the national grid Electricity consumption in MCC investment areas
What is the Project's estimated economic rate of return?	Land value
Did Senelec's customer service improve?	Customer satisfaction index

Did ownership of electrical appliances increase? What changes, if any, occurred in the size of the market for electrical appliances?	Number of new owners of electric appliances and equipment
Is increased knowledge of the connection process associated with higher connection rates?	Percent of households and firms who understand the connection process (P-25) percentage of households connected to the national grid
Are increases in women's use of electricity for productive purposes and adoption of time-saving equipment correlated?	Productive use of electricity Time savings
Is women's adoption of time-saving equipment associated with different time use and the welfare of children and youth, such as school attendance?	Time savings Increase in children's' study time

Description of the Evaluation Methodology

The evaluation design will be determined after MCC contracts the Independent Evaluator.

Data Sources

The data sources will be determined after MCC contracts the Independent Evaluator.

III.2.4 Reform Project Evaluation

Evaluation Questions

The evaluation questions, methodology, and data sources will be determined during the evaluation design phase after MCC contracts the Independent Evaluator. The evaluation questions and related indicators as defined in Annex III of the Compact are included in the table below. MCC and MCA will revise the evaluation questions when developing the evaluation SOW. Taken together, the evaluation questions will reflect and be guided by the following three questions:

1. Was the project implemented according to plan (in terms of quantity and quality of outputs)?
2. Did the project achieve its targeted outcomes, particularly its stated objective, in the timeframe and magnitude expected? Why or why not?
3. Do the results of the project justify the allocation of resources towards it?

Table 9: Evaluation Questions and Indicators of the Reform Project

Evaluation Questions	Indicators
Outcomes at the project level	
Did the long-term electricity marginal cost (or similar) decrease?	Adjusted service cost (Maximum Income Authorized, long-term marginal cost or similar)
Did the consumer surplus for a quality electricity increase?	Consumer surplus for a quality electricity service

Did the utility cost-recovery rate improve? What about other major electricity service companies?	Operation cost-recovery ratio
Project implementation	
What were the changes (if applicable) during the implementation? What were the reasons of those changes? How did or should they impact the project outcomes?	All performance indicators
To what extent did implementing contractors and entities monitor and analyze the sector dynamism? Did they adopt to it accordingly?	Not related to a specific measurable outcome, because this question is linked to the implementation process itself.
Was the implementation method based on evidence of promising practices found in the documentation on policy reforms and institutional development?	
Sector Governance Activity	
How did the project impact the cash flow of the national public utility? Did the improvement of the cash flow of the national public utility lead to increase in investments of the public sector on service improvement and rural electrification?	Operating cash flow ratio
How are management practices of unbundled entities compared with those of Senelec?	TBD
Did players find the road map, action plan and electricity code useful to improve the service quality and access?	Understanding by sector players of new sector policies and regulations
Did the creation of a transmission network administrator lead to a decrease of distributed electricity price and the electricity price in the electricity purchase contracts?	Share of less expensive generation sources in the overall energy transmitted Electricity price in electricity purchase contracts
What is the opinion of existing and new companies of the electricity sector in Senegal about the legal and regulatory framework?	Understanding by sector players of new sector policies and regulations
Did the competition regarding major contracts in the electricity sector in Senegal improve during and immediately after the Compact?	Average number of companies in competition on big contracts
Did the financial viability of rural electrification operators improve during the Compact?	Cost-recovery rate of rural operators on and off-grid
Did the MPE adopt new policies and practices that improved the planning and coordination?	Adoption of an integrated planning framework for investments
What improvements (if applicable) were made to the sector planning and coordination? Did that lead to a decrease in subscribed electricity prices and purchase of better electricity service quality?	Adoption of an integrated planning framework for investments Share of less expensive generation sources in the overall energy transmitted
Regulator Strengthening Activity	
Did the sector regulator become more active and efficient in monitoring standards and obligations of the electricity sector players?	TBD
How and to what extent did measures taken by the regulation body reduced costs in the sector?	Readjusted service cost (Maximum Income Authorized,

	long-term marginal cost or similar)
To what extent does the regulation body implement the adopted tariff plan?	(P-14) Tariff system reflecting costs
To what extent do players of the sector understand and respect the new sector regulations and policies?	Understanding by sector players of new sector policies and regulations
Do sector players find the regulatory process fair?	TBD
Did the new regulatory framework and measures taken by the regulator improve the efficiency (operational and capital) of the electricity service operators?	Costs recovery rate of owners of electricity service operators
Utility Strengthening Activity	
Was Senelec analysis of the reasons of the low performance credible?	TBD
Did Senelec capacity to manage transmission and distribution networks improve? Did these improvements lead to a reduction of service interruptions and whole-life costs?	SAIDI, SAIFI, whole-life costs
Did Senelec propose and implement realistic and appropriate recommendations to address these factors?	TBD
Did the implementation by Senelec of performance improvement measures lead to the intended results?	Loss of the system, SAIDI, SAIFI

Description of the Evaluation Methodology

The evaluation design will be determined after MCC contracts the Independent Evaluator.

Data Sources

The data sources will be determined after MCC contracts the Independent Evaluator.

III.3 Summary of Activities or Sub-Activities without Evaluations

All activities and sub-activities of the Compact are expected to be evaluated.

IV. M&E Implementation and Management

IV.1 Responsibilities

The MCA-Senegal II M&E team is composed of an M&E Director who has the key responsibility of leading and managing all M&E activities; and three managers who support the M&E Director in performing the M&E activities. Additionally, the M&E team will hire short-term support on an as needed basis. The M&E team will carry out or hire consultants to complete the following and other related activities:

- Direct implementation of all activities laid out in the M&E Plan and ensure all requirements of the M&E Plan are met by MCA;
- As the champion of results-based management, the M&E team will take steps to foster a results-oriented culture throughout MCA and its implementing partners–this includes

making sure that M&E information is used by the MCA management and project teams to improve Compact performance (feedback loop);

- Ensure that the M&E Plan is modified and updated as improved information becomes available;
- Oversee development and execution of an M&E system (including data-collection, data-analysis and reporting systems) integrated with the MCC Management Information System (MIS);
- Elaborate and document M&E policies, procedures, and processes in a guidance document to be used by all MCA-Senegal II staff and project implementers;
- Communicate the M&E Plan and explain the M&E system to all key stakeholders involved in the Compact, particularly project managers, to ensure a common understanding by all. This could take the form of orientation and capacity building sessions and could focus on issues such as:
    - Explaining indicator definitions, data collection methods and timing/frequency of data collection and reporting,
    - Data quality controls and verification procedures, and
    - Impact evaluation questions and methodology, etc.
- Develop and use a documentation system to ensure that key M&E actions, processes, and deliverables are systematically recorded. This may be accomplished either as part of the M&E information system or independently. The documentation may encompass the following elements:
    - Indicators and material evidence for reported values,
    - M&E Plan versions,
    - Reporting manuals and templates, and
    - Key M&E deliverables, including Terms of Reference (TORs), contracts/agreements, data collection instruments, reports/analyses, etc.
- Develop (with the Communication Unit, Environmental and Social Performance [ESP] teams, and Gender and Social Inclusion [GSI] teams) and implement a systematic results dissemination approach that draws on verified ITT data;
- Organize and oversee regular independent data quality reviews on a periodic basis to assess the quality of data reported to MCA;
- Participate in project monitoring through site visits, review of project reports and analysis of performance monitoring and other data;
- Update the M&E work plan periodically;
- Manage the M&E budget efficiently;
- Contribute to the design of the evaluation strategy;
- Collaborate with the procurement team to prepare and conduct procurement of M&E contracts;
- Ensure that data collection mechanisms are designed to collect data disaggregated by gender and other dimensions, as applicable and practical, and that the findings are presented at the appropriately disaggregated level; and

- Ensure data collection, storage, and dissemination activities maximize protection of confidentiality of survey respondents' personally identifiable information. This may require:
    - Facilitating the obtainment of authorizations from Data Protection Commission for the data collection;
    - Facilitating access to sample frames from the National Statistics Agency (ANSD);
    - Using lock and key cabinets for paper files;
    - Using secure file transfer systems;
    - Encrypting data files;
    - Employing password protection on data systems and data encryption;
    - Requiring signed acknowledgments of roles and responsibilities;
    - Requiring relevant stakeholders to sign non-disclosure agreements, and
    - Incorporating data protection standards into the organization records management procedures, or if necessary, developing records management procedures that includes such standards.

The M&E Director will be a part of MCA-Senegal II Management team, composed from MCA leadership, Project Directors, and other Directors. Collaboration with the procurement team will be very important to prepare and conduct timely procurement of M&E related contracts as well as ensuring that other implementation contracts contain necessary data reporting provisions.

Technical seminars and workshops for elaboration and dissemination of M&E reports shall be conducted in close cooperation with the MCA Communications team.

To prepare for post-Compact monitoring by the Government, the MCA-Senegal II M&E team should identify during the implementation a post-Compact Government point of contact (POC) for MCC earlier on in the program and work with that POC to build understanding of the MCC program and M&E process. This POC should be part of the Government entity that will be responsible for continuing the M&E activities of the Compact investments after its end date. The M&E team should also identify the Government entity that will be responsible for reviewing evaluation reports that are delivered post-Compact (e.g., project leads), to ensure that the relevant project stakeholders review and provide relevant comments prior to the publication of final reports.

IV.2 MCA Data Management System for the Monitoring and Evaluation

All MCAs must use the MCC MIS to submit the QDRP (including the ITT) to MCC. In addition, an MCA may decide to develop its own MIS for M&E activities and for collection of data from relevant government entities. However, any MIS development must be coordinated closely with both the MCC MIS and the MCA MIS initiatives.

IV.3 Review and Revision of the Monitoring and Evaluation Plan

The M&E Plan is designed to evolve over time, adapting to changes in program activities and improvements in performance monitoring and evaluation. In the fourth quarter of every year of the

Compact, or as necessary, the M&E Director of MCA-Senegal II and MCC M&E teams will check to what extent the M&E Plan has met its objectives. The review is intended to ensure that the M&E Plan measures program performance accurately and provides crucial information on the need for changes in project design. More specifically, the review:

- Ensures that the M&E plan captures the compliance of the normal evolution regarding the program expected outcomes.
- Checks whether indicator definitions are accurate and timely.
- Checks whether M&E indicators accurately reflect program performance.
- Updates indicator targets, as allowed by the MCC M&E Policy.
- Adds (or complete) indicators, as needed, to track hitherto unmeasured results.

The M&E Plan will be revised by MCA-Senegal II, in agreement with MCC M&E team, when the need for change has been identified in the review. The revision and approval process will follow the guidelines outlined in the MCC M&E Policy.

IV.4 Monitoring & Evaluation Budget

The budget for the implementation of the proposed M&E activities for the five-year term of the Compact is $14.4 million. The budget covers data collection and survey activities, capacity building and assistance for implementing entities and M&E staff, data quality review studies, performance indicators monitoring activities, and general M&E support.

The M&E budget does not include expenses related to the M&E staff whose salaries and field trips are included in the administrative budget of the Compact. This budget equally excludes costs for workshops organized as part of the M&E activities. The budget should not exceed the above-mentioned total amount over the five years, but the distribution of funding between budget lines and years may be adjusted based on the results of the M&E Plan or quarterly reviews if needed. The budget line items themselves may change.

While the resources for the implementation of surveys are allocated by MCA-Senegal II from the Compact funds, the evaluation design and analysis are to be funded directly by MCC. MCC is expected to commit 2% of the Compact budget to fund independent evaluations.

IV.5 Monitoring & Evaluation Work Plan

The MCA-Senegal II M&E team will develop an M&E work plan based on activities proposed in the M&E budget. This work plan will cover the five-year Compact term. The main activities may include capacity development services for the MCA-Senegal II M&E team and implementing entities, studies, remote monitoring equipment, and software. The M&E work plan will be developed and available during the second quarter of the Compact implementation and updated at least once a year.

ANNEX I: Indicator Documentation Table

Indicators with an asterisk (*) are considered evaluation indicators. MCA-Senegal II will collect data for those indicators but will exclude them from the indicator tracking table (ITT). Outputs and at least one indicator per objective-level outcome will be reflected in the ITT. This section includes three tables for each project: Transmission, Access, and Reform. Indicators are organized by Activity and sub-activity with outcomes preceding outputs. Annex II includes baseline and target values for the indicators in Annex I.

Transmission Project

Transmission Project										
Results Statement	**CI**	**Level**	**Indicator Name**	**Indicator Definition**	**Unit**	**Disagg.**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
Project-level										
Customers experience fewer service interruptions and voltage fluctuations **(OBJECTIVE-LEVEL)**	NA	Outcome	Number of load shedding events experienced by customers	Number of load shedding events recorded in a year	Number	Manual/ Automatic	Energy Management System (EMS), Network information system (SIR)	Lead Department of Networks (DPR)/(DANQS)	Quarterly	
Customers experience fewer service interruptions and voltage fluctuations **(OBJECTIVE-LEVEL)**	NA	Outcome	Total non-distributed energy on the network	Estimation of all non-distributed energy from service interruptions	Megawatt hours	Voltage level (LV, MV, HV)	EMS, SIR	DPR/DANQS	Quarterly	This indicator is also related to the Reform Project result: "Increased reliability of electricity supply". While data will be collected at all voltage levels, the Project's effect will be most direct at the HTB or HV level.
Improved network reliability and stability	P21	Outcome	System Average Interruption Duration Index (SAIDI)*	Sum of durations, in customer-hours, of all customer interruptions in a quarter / Total number of customers connected to transmission network in the same quarter	Rate	None	Integrated Database Management System (IDMS), SIR	DPR/DANQS	Quarterly	At the distribution level and only for clients in the Dakar region due to current (2021) data collection capabilities
Improved network	P22	Outcome	System Average Interruption	Sum of customer-interruptions in a quarter / Total number of	Rate	None	IDMS, SIR	DPR/DANQS	Quarterly	At the distribution level and only for clients in the Dakar

Transmission Project										
Results Statement	**CI**	**Level**	**Indicator Name**	**Indicator Definition**	**Unit**	**Disagg.**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
reliability and stability			Frequency Index (SAIFI)*	customers connected to network in the same quarter						region due to current (2021) data collection capabilities
Improved network reliability and stability	NA	Outcome	Customer perception of service quality*	[Sum of customers stating they have 'very good' or 'good' perception of the quality of the electricity services based on a representative sample of all electricity customers in Senegal / total number of survey respondents] x 100.	Percentage	Voltage level (LV domestic, LV business, MV, HV); Plant ownership (Senelec, CER)	"Baseline Study" consultant's secure data server	"Baseline Study" consultant	Semi-Annual	The exact indicator definition will be defined by the baseline study consultant
Customers experience fewer service interruptions and voltage fluctuations **(OBJECTIVE-LEVEL)**	NA	Outcome	Customers experiencing at least one service interruption*	[Sum of customers stating they have experienced at least one service interruption in the last days based on a representative sample of all electricity customers in Senegal / total number of survey respondents] X 100	Percentage	Voltage level (LV domestic, LV business, MV, HV); Plant ownership (Senelec, CER)	"Baseline Study" consultant's secure data server	"Baseline Study" consultant	Semi-Annual	The exact indicator definition will be defined by the baseline study consultant
Customers experience fewer service interruptions and voltage fluctuations **(OBJECTIVE-LEVEL)**	NA	Outcome	Average number of service interruptions experienced*	[Sum of service interruptions in the last seven days reported by a representative sample of all electricity customers in Senegal / total number of survey respondents] X 100	Number	Voltage level (LV domestic, LV business, MV, HV); Plant ownership (Senelec, CER)	"Baseline Study" consultant's secure data server	"Baseline Study" consultant	Semi-Annual	The exact definition will be defined by the baseline study consultant

Transmission Project										
Results Statement	**CI**	**Level**	**Indicator Name**	**Indicator Definition**	**Unit**	**Disag g.**	**Primary Data Source**	**Respon sible Party**	**Frequenc y of Reportin g**	**Additional Information**
Customers experience fewer service interruptions and voltage fluctuations **(OBJECTIVE-LEVEL)**	NA	Outcome	Average duration of service interruptions experienced*	[Sum of the average duration of all service interruptions in the last seven days reported by a representative sample of all electricity customers in Senegal / total number of service interruptions reported] X 100	Hours	Voltage level (LV domesti c, LV busines s, MV, HV); Plant owners hip (Senele c, CER)	"Baseline Study" consultant's secure data server	"Baseline Study" consultant	Semi-Annual	The exact definition will be defined by the baseline study consultant
Reduced generation costs **(OBJECTIVE-LEVEL)**	NA	Outcome	Average kWh generation cost	Weighted average of generation costs from all sources	CFA Francs	Power source type (fuel, coal, solar, wind, hydro; gas)	EMS, Generation Information System (SIP), DANQS database	DPR/DAN QS	Quarterly	
NA	P5	Process	Temporary employment generated in power infrastructure construction	The number of people temporarily employed or contracted by MCA-contracted construction companies to work on construction of new power infrastructure or reconstruction, rehabilitation, or upgrading of existing power infrastructure.	Number	Sex (Female /Male); Labor source (Foreig n/Local) ; Skill level (Skilled/ Semi-skilled/ Un-skilled)	Construction contractor human resource records	MOSES	Quarterly	Indicator is also for infrastructure under the Access Project
Transmission Network Build-Out Activity										
Increased quantity of electricity transmitted and distributed on the	NA	Outcome	Additional energy transmitted and distributed in the Dakar peninsula	Incremental energy transmitted in MWh in Dakar annually due to Transmission Network Build-out Activity. It's the additional load at the fourteen substations in the Dakar peninsula. This is calculated by subtracting	Megawat t hours	None	EMS SMARTSENEL EC, DANQS database	DPR/DAN QS	Quarterly	Substations : CAP-DES-BICHES, SOCOCIM, KOUNOUN, SOCOCIM SENELEC, SDE USINE DE

Transmission Project										
Results Statement	**CI**	**Level**	**Indicator Name**	**Indicator Definition**	**Unit**	**Disagg.**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
interconnected network **OBJECTIVE-LEVEL**				the maximum load the 14 Dakar substations can manage (574.8 GWh) from the actual energy departing that substation in a given period. The load flow model estimated the maximum load would be attained in 2023.						DESSALEMENT, BEL-AIR, HANN, MBAO, AÉROPORT, UNIVERSITÉ, CENTRE-VILLE, GUÉDIAWAYE, TER, SICAP
Undersea and underground cables constructed	P7	Output	Kilometers of transmission lines upgraded or built	The sum of linear kilometers of new, reconstructed, rehabilitated, or upgraded transmission lines that have been energized, tested and commissioned with MCC's support	Kilometers	Undersea / Underground	Provisional acceptance of works	Supervisory Engineer	Quarterly	
Undersea and underground cables constructed	P8	Output	Transmission throughput capacity added	The increase in throughput capacity, measured in megawatts, added by new, reconstructed, rehabilitated, or upgraded transmission lines that have been energized, tested and commissioned with MCC support	Megawatts	None	Provisional acceptance of works	Supervisory Engineer	Quarterly	
Substations constructed or expanded	NA	Output	Number of substations constructed or expanded	Sum of air-insulated and gas-insulated substations constructed or expanded with MCC funds	Number	Constructed / expanded	Provisional acceptance of works	Supervisory Engineer	Quarterly	
Transformers added	NA	Output	Number of transformers added	The sum of transformers that are added with MCC funding as part of the Transmission Network Build-out Activity	Number	None	Provisional acceptance of works	Supervisory Engineer	Quarterly	
Transmission substation capacity added	P9	Output	Transmission substation capacity added	The total added transmission substation capacity, measured in megavolt amperes, that is energized, commissioned and accompanied by a test report and supervising engineer's certification resulting from new construction or refurbishment of existing substations that is due to MCC support	Megavolt ampere	None	Provisional acceptance of works	Supervisory Engineer	Quarterly	This line is just for the Dakar Network Activity.
Transformer Replacement Activity										
Increased quantity of electricity transmitted on the	NA	Outcome	Additional energy transmitted from added transformers	Incremental energy transmitted annually through the Touba, Diass, Hann, and Aeroport substations, net of transformer losses as result of MCC's investment. This is	Megawatt hours	Substation (Touba, Diass, Hann,	EMS, SMARTSENELEC, DANQS database	DPR/DANQS	Quarterly	Measurement of this indicator requires knowing the maximum load of the four substations,

Transmission Project										
Results Statement	**CI**	**Level**	**Indicator Name**	**Indicator Definition**	**Unit**	**Disagg.**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
interconnected network **OBJECTIVE-LEVEL**				calculated by subtracting the maximum load the substation can manage from the actual energy departing that substation in each period.		Aeroport)				which has not yet been obtained.
Reduced congestion on overutilized lines and substations	NA	Outcome	Substation overloading	[Weighted average of the Non-coincident Peak Load (MVA) of the Touba, Diass, Hann, and Aeroport substations / Weighted average of the Firm Capacity in Contingency (N-1) (MVA) the Touba, Diass, Hann, and Aeroport substations] X 100	Percentage	Substation (Touba, Diass, Hann, Aeroport)	EMS, SMARTSENELEC, DANQS database	DPR/DANQS	Annual	This indicator is currently defined for the Transformer Replacement Activity. An additional indicator may be added to capture this result for the Transmission Network Build-Out Activity
Reduced transformer losses	NA	Outcome	Transformer losses	1 – (Quantity of electricity in MWh distributed to posts rehabilitated with MCC funds / Quantity of electricity in MWh leaving transformers rehabilitated with MCC funds) X 100	Percentage	None	EMS, SMARTSENELEC, DANQS database	DPR/DANQS	Quarterly	We do not intend on measuring this indicator. The decrease is expected to be minimal. Measurement would require installing grid monitors at the arrival and departures of substations, which would not be cost-effective. The CBA model assumes transformer losses are stable at 2%.
Transformers upgraded or replaced	NA	Output	Number of transformers upgraded or replaced (Transformer Replacement Activity)	The sum of transformers that are upgraded or replaced with MCC funding through the Transformer Replacement Activity	Number	None	Provisional acceptance of works	Supervisory Engineer	Quarterly	
Transmission substation capacity added	P9	Output	Transmission substation capacity added (Transformer Replacement Activity)	The total added transmission substation capacity, measured in megavolt amperes, that is energized, commissioned and accompanied by a test report and supervising engineer's certification	Megavolt ampere	None	Provisional acceptance of works	Supervisory Engineer	Quarterly	This line is just for the Transformer Replacement Activity

Transmission Project										
Results Statement	**CI**	**Level**	**Indicator Name**	**Indicator Definition**	**Unit**	**Disagg.**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
				resulting from new construction or refurbishment of existing substations						
Grid Stabilization Activity										
Increased integration of intermittent renewable energy	NA	Outcome	Electricity from intermittent sources	[Electricity transmitted on the interconnected network from solar and wind power plants / all energy transmitted on the interconnected network excluding electricity from gas power plants] X 100	Percentage	None	EMS, SIP	DPR/DANQS	Annual	The introduction of gas is expected to be by far the most significant change to the energy mix in Senegal. Excluding it in this indicator allows us to better appreciate the evolving share of solar and wind.
Increased integration of intermittent renewable energy	NA	Outcome	Capacity factor of **solar** energy power plants*	(Net annual electricity generated (MWh) from solar power plants / (24 hours*365.25 days)) / Installed capacity of solar power plants (MW)	Percentage	None	EMS, SIP	DPR/DANQS	Annual	The Project team has noted limitations with this indicator. We are keeping it due to uncertainty in obtaining reliable data for "intermittent energy curtailment"
Increased integration of intermittent renewable energy	NA	Outcome	Capacity factor of **wind** energy power plants*	(Net annual electricity generated (MWh) from wind power plants / (24 hours*365.25 days)) / Installed capacity wind power plants (MW)	Percentage	None	EMS, SIP, DANQS database	DPR/DANQS	Annual	The Project team has noted limitations with this indicator. We are keeping it due to uncertainty in obtaining reliable data for "intermittent energy curtailment"
Increased integration of intermittent renewable energy	NA	Outcome	Intermittent energy curtailment*	Planned (or deemed) quantity of electricity generated from all solar and wind sources in a year *minus* Actual quantity of electricity generated from solar and wind sources in a year	Megawatt hours	Plant ownership (Private or Public) Power source type (Solar and wind)	TBD	Senelec and IPPs	Quarterly	The current definition does not correspond to Senelec's understanding of the indicator and will be revised with Senelec (DESA)

Transmission Project										
Results Statement	**CI**	**Level**	**Indicator Name**	**Indicator Definition**	**Unit**	**Disagg.**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
Frequency and voltage fluctuations controlled and reduced	NA	Outcome	Voltage stability*	[Number of hours during which the voltage is +/- 5% of the acceptable level on 225 kV and 90 kV lines / divided by number of hours in the period] X 100 Senelec currently (2021) measures this indicator at four substations: Bel Air, Sococim, Tobène, and Kaolack.	Percentage	None	EMS	DPR/DANQS	Quarterly	Voltage stability is defined as ability of a power system to sustain fixed tolerable voltage at every single bus of the network under standard operating conditions as well as after being subjected to a disruption (Kundur, 1994).
Frequency and voltage fluctuations controlled and reduced	NA	Outcome	Frequency stability*	[Number of hours during which the frequency level is between 47.5 Hz and 52.5 Hz / number of hours during the period] X 100	Percentage	None	EMS	DPR/DANQS	Quarterly	
Increased reserve availability and efficiency	NA	Outcome	Ratio of total battery capacity to required operating reserve capacity	This is the contribution of the storage batteries to the total reserve required for network stability within a maximum period of 10 minutes. It is calculated with the ratio between the total capacity of the acquired batteries (MW-MWh) and the total required capacity of the batteries (80 MW-80 MWh)	Percentage	None	TBD	TBD	Quarterly	
Operating reserve strategy implemented	NA	Outcome	Power generation capacity equipped with speed and voltage regulator*	The sum of generation capacity in MVA with a speed and voltage regulator divided by the sum of all generation capacity. Rental generation (e.g., Aggreko) and sub-regional units (Manatali, Felou) are excluded	Percentage	Plant ownership (private, public)	Provisional acceptance of works	Senelec focal point	Quarterly	
Operating reserve strategy implemented	NA	Outcome	Number of batteries installed	Number of batteries installed as defined in the operating reserve strategy	Number	None	Provisional acceptance of works	Supervisory Engineer	Quarterly	This Activity may change at which point indicators and targets would be revised.
Operating reserve strategy implemented	NA	Outcome	Battery storage capacity installed	Total capacity in ampere-hours of battery storage	Megavolt ampere	None	Provisional acceptance of works	Supervisory Engineer	Quarterly	This Activity may change at which point indicators and targets would be revised.
Operating reserve	NA	Outcome	Execution rate of the operating	Can be estimated as (the value of executed contracts supporting the	Percentage	None		Senelec, AFD, BM,	Quarterly	

Transmission Project										
Results Statement	**CI**	**Level**	**Indicator Name**	**Indicator Definition**	**Unit**	**Disagg.**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
strategy implemented			reserve strategy*	reserve strategy divided by the total estimated cost of the strategy's action plan) x 100			Senelec focal point	KFW, IPP, MCAD		
Increased dispatching from least cost-sources	NA	Outcome	Least-cost generation*	Quantity of energy dispatched from 10% of the least expensive generation units in a quarter / Total quantity of energy dispatched in a quarter	Percentage	None	EMS, SIP, DANQS database	DPR/DANQS	Quarterly	This is also an indicator for the Reform Project
Reduced new development of thermal generation capacity	NA	Outcome	Thermal generation capacity development*	(Number of megawatts in new installed thermal generation capacity divided total installed generation capacity in one year) x 100	Percentage	Plant ownership (Private, Public)	Senelec report on energy flows ("Rapport mouvements d'energie")	DPR/DANQS	Annual	
Operating reserve strategy developed and adopted	NA	Output	Adoption date of operating reserve strategy	Date at which the operating reserve strategy is adopted	Date	N/A	Letter from Senelec indicating adoption of Spinning Reserves Action Plan	Senelec focal point	Once	Condition precedent per Compact Annex IV 1(a)(i)
Remote load shedding special protection system established	NA	Output	Date of receipt of remote load-shedding equipment	Date on which remote load shedding equipment is acquired and received so that it can play its role as defined in the operating reserve strategy	Date	N/A	Provisional acceptance of works	Supervisory Engineer	Once	
Battery storage used	NA	Risk/Assumption	Quantity of energy injected on the network from the newly installed batteries	Quantity of energy injected on the network from the newly installed batteries	Megawatt hours	Primary reserve/ Energy destocking	TBD	TBD	Quarterly	

Access Project

Access Project										
Results Statement	**CI**	**Indicator Level**	**Indicator Name**	**Indicator Definition**	**Unit of Measure**	**Disaggregation**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
Project-Level										
Improved supply and demand for quality electricity in rural and peri-urban areas of Senegal **(OBJECTIVE-LEVEL)**	NA	Outcome	Electricity consumption for domestic use	The total Megawatt hours of electricity consumed annually for domestic uses by the population gaining access to a legal electricity connection through the project.	Megawatt hours	Sub-activity (Tambacounda; Foundiougne; Nioro du rip, Bounkiling et Medina Yoro Foula; Velingara)	Report produced by invoicing software	General studies department (DEG)	Quarterly	
Improved supply and demand for quality electricity in rural and peri-urban areas of Senegal **(OBJECTIVE-LEVEL)**	NA	Outcome	Electricity consumption for productive use	The total Megawatt hours of electricity consumed annually for productive uses by the population gaining access to legal electricity connection through the Project	Megawatt hours	Sub-activity (Tambacounda; Foundiougne; Nioro du rip, Bounkiling et Medina Yoro Foula; Velingara)	Report produced by invoicing software	DEG	Quarterly	
Distribution Network Reinforcement Activity										
Improved performance and reliability of the distribution network	P19	Outcome	Distribution system losses	1 – [Total megawatt hours billed / Total megawatt hours received from transmission]	Percentage	None	EMS, SMARSENELEC, DANQS database	DPR/DANQS	Quarterly	This indicator also measures the Reform Project's "Increased reliability of electricity supply" result.
Reduction of service interruptions	P21	Outcome	System Average Interruption Duration Index (SAIDI) in MCC intervention areas*	Sum of durations, in customer-hours, of all customer interruptions in a quarter / Total number of customers connected to network in the same quarter	Hours	TBD	SIR, IDMS	DPR/DANQS	Quarterly	This indicator will measure SAIDI only in the Distribution Network Reinforcement Activity's area of intervention, and the disaggregation will be defined with the design study. Senelec should transmit data

Access Project										
Results Statement	**CI**	**Indicator Level**	**Indicator Name**	**Indicator Definition**	**Unit of Measure**	**Disaggregation**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
										only from the Activity's intervention area for this indicator
Reduction of service interruptions	P22	Outcome	System Average Interruption Frequency Index (SAIFI) in MCC intervention areas*	Sum of customer-interruptions in a quarter / Total number of customers connected to network in the same quarter, in MCC intervention areas	Number	TBD	SIR, IDMS	DPR/DANQS	Quarterly	The disaggregation will be defined with the design study. Senelec should submit data for this indicator from the Activity's area of intervention
Reduction of technical losses	NA	Outcome	Avoided technical losses	Avoided technical losses on lines improved with MCC funding.	Kilowatt hours	None	EMS	DANQS	Annual	WSP Feasibility Study Report, Chapter 9 page 17 includes a list of lines.
Improved electricity technical service quality for customers	NA	Outcome	Non-distributed energy on the distribution network	Quantity of non-distributed energy caused by under-frequency resulting from distribution network outages	Megawatt hours	None	Senelec Annual Distribution Report	DANQS	Quarterly	
Improved customer confidence in and satisfaction with Senelec and concessionaires	NA	Outcome	Customer satisfaction index*	Percentage of survey respondents stating that they are satisfied or very satisfied with the quality of electricity they receive from their service provider	Percentage	Sex (male, female); Plant ownership (Senelec, CER) Customer (household, businesses)	"Baseline Study" consultant's secure data server	"Baseline Study" consultant	Semi-Annual	
Improved customer confidence in and satisfaction with Senelec and concessionaires	NA	Outcome	Customer confidence index*	Percentage of survey respondents stating that they have trust in their electricity service provider	Percentage	Sex (male, female); Plant ownership (Senelec, CER)	"Baseline Study" consultant's secure data server	"Baseline Study" consultant	Semi-Annual	
Reinforced distribution lines	NA	Output	Switches installed	Total number of switches installed with MCC support	Number	Type of switches (remote-	Provisional acceptance of works	Supervisory Engineer	Quarterly	

Access Project										
Results Statement	**CI**	**Indicator Level**	**Indicator Name**	**Indicator Definition**	**Unit of Measure**	**Disaggregation**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
						controlled three-pole, voltage dip breaking (IACT), manual control				
Reinforced distribution lines	NA	Output	Attachments between radial lines sections	Total number of kilometers of attachments between radial line sections installed with MCC funding and receiving provisional acceptance from MCA Senegal II	Kilometers	None	Provisional acceptance of works	Supervisory Engineer	Quarterly	
Reinforced distribution lines	NA	Output	Fault indicators with tele-indication	Total number of fault indicators with tele-indication installed with MCC funding and receiving provisional acceptance from MCA Senegal II	Number	None	Provisional acceptance of works	Supervisory Engineer	Quarterly	
Reinforced distribution lines	NA	Output	Remote-controlled recloser circuit breakers	The total number of remote-controlled recloser circuit breakers installed with MCC funding and receiving provisional acceptance from MCA Senegal II	Number	None	Provisional acceptance of works	Supervisory Engineer	Quarterly	
Supply Side Activity										
Improved electricity coverage in intervention areas	NA	Outcome	Electrified localities	The total number of localities electrified with MCC funding. A locality is considered electrified when there is at least	Number	Sub-activity (Tambacounda; Foundiougne; Nioro du rip, Bounkiling et Medina	Provisional acceptance of works	Superviser Engineer	Quarterly	

Access Project										
Results Statement	**CI**	**Indicator Level**	**Indicator Name**	**Indicator Definition**	**Unit of Measure**	**Disaggregation**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
				one legal connection to the network.		Yoro Foula; Velingara)				
Improved electricity access in intervention areas	NA	Outcome	Electricity access in project areas	The population with effective access to electricity divided by the total population of the area.	Percentage	Sub-activity (Tambacounda; Foundiougne; Nioro du rip, Bounkiling et Medina Yoro Foula; Velingara)	Monitoring and Evaluation System (SSE)	CEP / MPE	Quarterly	This indicator is also related to the "Optimized access strategy in peri-urban and rural zones" outcome in the Reform Project
Increased number of households, firms, and critical social infrastructure connected to the grid	P25	Outcome	Percentage of households connected to the national grid	Number of households that have access to a legal connection to electricity service from an electrical utility or service provider / Total number of households in the country.	Percentage	None	Collection sheets from 'focal points of entities that produce and / or consume energy'	CEP / MPE	Quarterly	This result is also an outcome of Consumer Demand Support Activity.
Increased number of households, firms, and critical social infrastructure connected to the grid	NA	Outcome	Customers added by project	The number of new customers that have gained access to a legal connection to electricity service from an electrical utility or service provider.	Number	Sub-activity (Tambacounda; Foundiougne; Nioro du rip, Bounkiling et Medina Yoro Foula; Velingara) Customers (Household, Firm, social infrastructure)	Collection sheets from 'focal points of entities that produce and / or consume energy'	CEP/MPE	Quarterly	This result is also an outcome of the Consumer Demand Support Activity. Social infrastructure refers to buildings used for the provision of social services such as schools or health centers.
Medium and low voltage lines built and transformers installed	P10	Output	Kilometers of distribution lines	The sum of linear kilometers of new, reconstructed, rehabilitated, or	Kilometers	Sub-activity (Tambacounda; Foundiougn	Provisional acceptance of works	Supervisory Engineer	Quarterly	

Access Project										
Results Statement	**CI**	**Indicator Level**	**Indicator Name**	**Indicator Definition**	**Unit of Measure**	**Disaggregation**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
			upgraded or built	upgraded distribution lines that have been energized, tested and commissioned with MCC support.		e; Nioro du rip, Bounkiling et Medina Yoro Foula; Velingara) Voltage level (Three-phase MV, Single-phase MV, LV)				
Medium and low voltage lines built and transformers installed	NA	Output	Transformers installed	Total number of transformers installed with MCC support	Number	By power (50kVA, 100 kVA)	Provisional acceptance of works	Supervisory Engineer	Quarterly	
Education Campaign for Electricity Literacy Sub-Activity (Consumer Demand Support Activity)										
Good knowledge of standards and equipment with high energy efficiency	NA	Outcome	Level of consumer knowledge of energy efficiency standards and equipment*	Percentage of survey respondents stating that they have 'very good' or good' knowledge of energy efficiency standards and equipment	Percentage	Sex (male, female); Customer type (household, businesses)	"Baseline Study" consultant's secure data server	"Baseline Study" consultant	Semi-Annual	
Adoption of electrical efficiency practices	NA	Outcome	Adoption rate of attitudes and practices related to energy efficiency equipment and standards*	Percentage of survey respondents stating that they are Fully or partially adopting attitudes and practices related to energy efficiency equipment and standard	Percentage	Sex (male, female); Customer type (household, businesses)	"Baseline Study" consultant's secure data server	"Baseline Study" consultant	Semi-Annual	

Access Project										
Results Statement	**CI**	**Indicator Level**	**Indicator Name**	**Indicator Definition**	**Unit of Measure**	**Disaggregation**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
Adoption of electrical efficiency practices	NA	Outcome	Percentage of households using energy-efficient appliances*	The number of households using energy-efficient appliances divided by the total number of households with access to electricity in MCC intervention areas.	Percentage	Sex (male, female)	"Baseline Study" consultant's secure data server	"Baseline Study" consultant	Semi-Annual	
Improved consumer knowledge on the key elements of the service regulations and the standards and obligations of Senelec and the concessioners	NA	Outcome	Level of knowledge of the key elements of the service regulations and the standards and obligations in force at the level of Senelec and dealers by consumers*	Percentage of survey respondents stating that they have very good or good knowledge of the key elements of the service regulations and the standards and obligations in force at the level of Senelec and dealers by consumers	Percentage	Sex (male, female); Customer type (household, businesses)	"Baseline Study" consultant's secure data server	"Baseline Study" consultant	Semi-Annual	
Improved consumer knowledge on the key elements of the service regulations and the standards and obligations of Senelec and the concessioners	NA	Outcome	Level of household understanding of the connection process*	Percentage of survey respondents stating that they have Very good or good knowledge of the connection process	Percentage	Sex (male, female); Customer type (household, businesses)	"Baseline Study" consultant's secure data server	"Baseline Study" consultant	Semi-Annual	
Improved consumer knowledge on the key elements of the service regulations and the standards and obligations of	NA	Outcome	Level of knowledge of network connection time*	Percentage of survey respondents stating that they have 'very good' or 'good' knowledge of	Percentage	Sex (male, female); Customer type (household, businesses)	"Baseline Study" consultant's secure data server	"Baseline Study" consultant	Semi-Annual	

Access Project										
Results Statement	**CI**	**Indicator Level**	**Indicator Name**	**Indicator Definition**	**Unit of Measure**	**Disaggregation**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
Senelec and the concessioners				network connection time						
Improved appreciation of households and enterprises of the role of electricity as an input to income-generating activities	NA	Outcome	Level of perception of households and businesses on the role of electricity as an input to income-generating activities in the areas of intervention of the MCC (commune or locality)*.	Percentage of households and businesses respondents stating that the role of electricity as an input to income-generating activities is 'very important' or 'important'	Percentage	Sex (male, female); Customer type (household, businesses)	"Baseline Study" consultant's secure data server	"Baseline Study" consultant	Semi-Annual	
Communication on energy efficiency	NA	Output	Number of energy efficiency messages	Total number of messages delivered on energy efficiency	Number	By type of medium (television, radio, billboards, print media)	Provisional acceptance of works	Consultant education communication	Quarterly	
Communication on energy consumption and billing	NA	Output	Number of messages on energy consumption and its billing	Total number of messages broadcast at national level on energy consumption and its billing	Number	By type of medium (television, radio, billboards, print media)	Provisional acceptance of works	Education Communication Consultant	Quarterly	
Communications on the network connection process	NA	Output	Number of messages on the connection process to the Senelec RI network	Total number of messages broadcast on the process of connecting to the Senelec RI network in the areas in MCC's areas of intervention	Number	By type of medium (television, radio, billboards, print media)	Provisional acceptance of works	Education Communication Consultant	Quarterly	
Communications on productive uses of electricity	NA	Output	Number of messages on the productive uses of	The total number of messages broadcast on the productive uses of	Number	By type of medium (television, radio,	Provisional acceptance of works	Education	Quarterly	

Access Project										
Results Statement	**CI**	**Indicator Level**	**Indicator Name**	**Indicator Definition**	**Unit of Measure**	**Disaggregation**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
			electricity in MCC intervention areas.	electricity in MCC's areas of intervention.		billboards, print media)		Communication Consultant		
Communications on productive uses of electricity	NA	Output	Number of entities benefiting from accompaniment activities and support for productive uses	Total number of entities benefiting from MCC-funded activities to develop the productive uses of electricity	Number	By type of entity (individual, GIE, GPF)	Provisional acceptance of works	Education Communication Consultant	Quarterly	
Supporting Connections Sub-Activity (Consumer Demand Support Activity)										
Improved availability of equipment for connections	NA	Outcome	Level of perception of households in relation to the availability of equipment for connections in the areas of intervention of the MCC (municipality or locality) *	Percentage of survey respondents stating that equipment for connections are 'very available' or 'available'	Percentage	Sex (male, female)	"Baseline Study" consultant's secure data server	"Baseline Study" consultant	Semi-Annual	
Improved inventory management and availability of technical resources	NA	Outcome	Number of stock-outs	The number of stock-outs of electrical meters per year	Number	None	Commercial database of Senelec/concessionaires	Sales department	Annual	
Improved inventory management and availability of technical resources	NA	Outcome	Time to first visit	Average number of days between when a new consumer makes initial demand and the day the operator conducts his first visit	Days	None	Commercial database of Senelec/concessionaires	Sales department	Annual	
Improved inventory management and availability of	NA	Outcome	Time to connect	Average number of days between when a new customer pays the electricity service	Days	None	Commercial database of Senelec/concessionaires	Sales department	Annual	

Access Project										
Results Statement	**CI**	**Indicator Level**	**Indicator Name**	**Indicator Definition**	**Unit of Measure**	**Disaggregation**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
technical resources				provider and when s/he is connected						
Improved communications and client relationships	NA	Outcome	Degree of customer satisfaction with the relationships and communication developed by electricity suppliers*	Percentage of survey respondents stating that they are very satisfied or satisfied with the electricity suppliers' client relations and communication.	Percentage	Sex (male, female); Customer type (household, businesses)	"Baseline Study" consultant's secure data server	"Baseline Study" consultant's secure data server	Semi-Annual	
Increase in the number of qualified and competent electricians in interior wiring	NA	Outcome	Proportion of qualified and competent electricians in interior wiring in MCC's intervention areas*	Number of electricians qualified and competent in inside wiring/total number of electricians in MCC intervention areas	Percentage	Sex (male, female)	"Baseline Study" consultant's secure data server	"Baseline Study" consultant	Semi-Annual	
Increased number of electricians qualified to do interior wiring	NA	Outcome	Qualified electricians*	Number of electricians qualified to do interior wiring for new connections per 1,000 clients in MCC's intervention areas	Number	Sex (male, female)	"Baseline Study" consultant's secure data server	"Baseline Study" consultant	Semi-Annual	
Improved access of targeted customers to reliable service providers	NA	Outcome	Level of client satisfaction with providers*	Percentage of survey respondents stating that they are Very satisfied or satisfied with providers in rural areas	Percentage	Sex (male, female); Customer type (household, businesses)	"Baseline Study" consultant's secure data server	"Baseline Study" consultant	Semi-Annual	
Capacity building of stakeholders in communications (regional level)	NA	Output	Number of stakeholders strengthened in	Total number of stakeholders that have benefited from capacity	Number	Plant powership (Senelec, ERA)	Provisional acceptance of works	Education	Quarterly	

Access Project										
Results Statement	**CI**	**Indicator Level**	**Indicator Name**	**Indicator Definition**	**Unit of Measure**	**Disaggregation**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
			communication	building in communication with ACM support				Communication Consultant		
Customer service evaluation is done	NA	Output	Customer service evaluation date	Date on which the customer service assessment is completed	Date	None	Provisional acceptance of works	Consultant	Once	
Technical assistance provided to Senelec's regional offices and concessionaires	NA	Output	Number of times technical assistance is provided to Senelec regional offices and concessionaires	The number of times technical assistance is provided to Senelec regional offices and concessionaires in terms of capacity building and/or support missions	Number	Nature of assistance (training, advisory support, other)	Provisional acceptance of works	Connection Support Consultant	Quarterly	The type of technical assistance will be defined during the M&E Plan revision
Inventory management system	NA	Output	Date of establishment of the inventory management system	Date of the establishment of the inventory management system	Date	None	Provisional acceptance of works	Connection Support Consultant	Once	
Inventory of electricians qualified to do interior wiring	NA	Output	Date of completion of the inventory of electricians qualified to make the inside wire	The date at which MCA-Senegal II, MCC, and Senelec accept the final version of the consultant's assessment report	Date	None	Provisional acceptance of works	Connection Support Consultant	Once	
Inventory of service providers able to conduct a study for connecting households beyond 35 meters of the network	NA	Output	Date of realization of the state of the service providers able to make the study to connect households beyond 35 meters of the network	Date on which the inventory of service providers capable of doing the study to connect households beyond 35 meters of the network was carried out	Date	None	Provisional acceptance of works	Connection Support Consultant	Once	
Trained electricians	NA	Output	Number of electricians trained	This is the total number of	Number	Sex (male, female)	Provisional acceptance of works	Connection	Quarterly	

Access Project										
Results Statement	**CI**	**Indicator Level**	**Indicator Name**	**Indicator Definition**	**Unit of Measure**	**Disaggregation**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
				electricians trained with MCC support				Support Consultant		
Market Facilitation for Equipment Access Sub-Activity (Consumer Demand Support Activity)										
Equipment suppliers seek and exploit market opportunities in the project areas	NA	Outcome	Number of equipment suppliers operating in project areas	Number of suppliers involved in the MCC intervention areas	Number	None	Analysis report	"Baseline study consultant"/Consultant IED	Annual	
Financial institutions have an improved understanding of the needs of low-income households	NA	Outcome	Number of credits granted for access to equipment	Numbers of credits granted for access to equipment in MCC intervention areas	Number	None	Analysis report	"Baseline study consultant"/Consultant facilitation for equipment	Annual	The unit of measure can be modified to percentage if information on the number of requests is available
Equipment available in the market meet the needs of low-income households	NA	Outcome	Satisfaction rate with acquired equipment*	Percentage of survey respondents stating that they are satisfied or very satisfied with acquired equipment	Percentage	Sex (male, female); Customer type (household, businesses)	"Baseline Study" consultant's secure data server	"Baseline study consultant"	Semi-Annual	
Adapted financial products are available to low-income households	NA	Outcome	Satisfaction rate with financial products*	Percentage of survey respondents stating that they are satisfied or very satisfied with financial products	Percentage	Sex (male, female); Customer type (household, businesses)	"Baseline Study" consultant's secure data server	"Baseline study consultant"	Semi-Annual	
Increased use of electrical equipment	NA	Outcome	Electrical equipment uses	Number of households and businesses owning or renting at least one electrical appliance in the project's target departments / total number of households and	Percentage	Sex (male, female); Customer type (household, businesses)	"Baseline Study" consultant's secure data server	"Baseline Study" consultant	Semi-Annual	

Access Project										
Results Statement	**CI**	**Indicator Level**	**Indicator Name**	**Indicator Definition**	**Unit of Measure**	**Disaggregation**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
				businesses in these departments						
Technical assistance to financial institutions	NA	Output	Number of times technical assistance is provided to financial institutions	Total number of times technical assistance is provided to financial institutions with MCC support	Number	Sub-activity (Tambacounda; Foundiougne; Nioro du rip, Bounkiling et Medina Yoro Foula; Velingara)	Provisional acceptance of works	Connection Support Consultant	Quarterly	The type of technical assistance will be defined during the M&E Plan revision
Technical assistance to equipment suppliers	NA	Output	Number of times technical assistance is provided to equipment suppliers	Total number of times technical assistance is provided to equipment suppliers with MCC support	Number	Sub-activity (Tambacounda; Foundiougne; Nioro du rip, Bounkiling et Medina Yoro Foula; Velingara)	Provisional acceptance of works	Connection Support Consultant	Quarterly	

Reform Project

Reform Project										
Results Statement	**CI**	**Level**	**Indicator Name**	**Definition**	**Unit**	**Disagg.**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
Project-level[31]										
Improved Customer Satisfaction **OBJECTIVE-LEVEL**	NA	Outcome	Customer satisfaction index	Percentage of survey respondents stating that they are 'satisfied' or 'very satisfied' with the quality of electricity they receive from their service provider	Percentage	Sex (Male, Female); Voltage level (LV domestic, LV business, MV, HV); Plant ownership (Senelec, CER)	"Baseline Study" consultant's secure data server	Baseline study consultant	Semi-Annual	The exact definition will be defined by the baseline study consultant This indicator is related to "Increased reliability of electricity supply" result
Increase in access to electricity **OBJECTIVE-LEVEL**	NA	Outcome	Rate of access to electricity	The population with effective access to electricity divided by the total population of the area.	Percentage	Urban/rural	SSE	CEP / MPE	Quarterly	
Improved financial viability of operators **OBJECTIVE-LEVEL**	P24	Outcome	Operating cost-recovery ratio	Total revenue collected / Total operating cost. Total operating cost is defined as operating expenses plus depreciation.	Percentage	Plant ownership (Senelec/CER)	Financial statements of Senelec and concessionaires	Senelec and ASER focal points	Annual	Revenue and operating costs are of Senelec and concessionaires. This indicator will also be calculated for off grid operators if they are included in the scope of ASER capacity building
Improved financial viability of operators	NA	Outcome	Operating cash flow ratio	The operator's ability to meet its short-term commitments. It is calculated by the following formula: Cash flow from operations (of Senelec and	Percentage	Plant ownership (Senelec/CER)	Financial statements of Senelec and concessionaires	Senelec and ASER focal points	Annual	This indicator is also related to the "Sustainable cash flow due to reliable/timely

[31] "Increased reliability of electricity supply" result will not measure here since related indicators are included in Transmission and Access Projects.

Reform Project										
Results Statement	**CI**	**Level**	**Indicator Name**	**Definition**	**Unit**	**Disagg.**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
OBJECTIVE-LEVEL				Concessionaires) / current liabilities of the utility (of Senelec and Concessionaires)						payment by government to utility" result
Improved financial viability of operators **OBJECTIVE-LEVEL**	NA	Outcome	Net return on equity*	The profitability of the company (Senelec and concessionaires), translated in terms of net income, relative to its equity. It is calculated by the following formula: Net Profit / Equity.	Percentage	Plant ownership (Senelec/CER)	Financial statements of Senelec and concessionaires	Senelec and ASER focal points	Annual	
Increased reliability of electricity supply **(OBJECTIVE-LEVEL)**	NA	Outcome	Total non-distributed energy on the network	Estimation of all non-distributed energy from service interruptions	Megawatt hours	Voltage level (LV, MV, HV)	EMS	DANQS	Quarterly	Indicator is included under the Transport Project
Increased reliability of electricity supply **(OBJECTIVE-LEVEL)**	P19	Outcome	Distribution system losses	1 – [Total megawatt hours billed / Total megawatt hours received from transmission]	Percentage	None	Senelec Annual Distribution Report	DANQS	Quarterly	Indicator is included under the Access Project
Sector Governance Activity										
Improved sector investment planning **KEY TARGETED RESULT**	NA	Outcome	Integrated investment planning practices*	The average of scores in the "integrated investment planning assessment framework"	Index	None	Consultant report	Sofreco or Mathematica	TBD	Indicator will be measured at baseline, interim and final. Result related to both the Sector Governance and MPE planning. Indicator also covers the following result: "Integrated and least-cost investment planning (PIMC) in effect", "Funding needs better identified for realistic rural electrification plans" and "Higher quality partners and

Reform Project										
Results Statement	**CI**	**Level**	**Indicator Name**	**Definition**	**Unit**	**Disagg.**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
										services procured"
Reduced cost of service	N A	Outcome	Average cost per kWh	The cost of the kWh weighted average of the energy transmitted across the interconnected network	CFA Francs	None	EMS	Transport and energy purchasing department	Quarterly	Result related to all three sub-activities and Network management sub-activity under Utility Strengthening Activity
GoS obligations to Senelec decreased	N A	Outcome	GoS debt obligations to Senelec	The outstanding balance of amounts due to Senelec for electricity bills and compensation in accordance with the Sector Repayment Plan and Tariff Plan	CFA Francs	None	Extract from Senelec financial statement showing payment receipt	Energy Support Fund (FSE)	Annual	An alternate data source is documentation from the Energy Support Fund or the Ministry of Finance showing the payment was made
Sector reimbursement plan adopted	N A	Output	Sector reimbursement plan adoption	Date at which the Ministry of Finance and Budget issues an official letter to MCA confirming its adoption of the reimbursement plan	Date	None	Copy of letter	MCA Senegal II General Counsel	Once	
Legal and Sector Framework Sub-Activity (Sector Governance Activity)										
Optimized dispatching	N A	Outcome	Least-cost generation*	Quantity of energy dispatched from the 10% least expensive generation units in a quarter / Total quantity of energy dispatched in a quarter	Percentage	None	EMS	Senelec focal point	Quarterly	This result is also related to Network Management sub-activity
Third-party network access in effect	N A	Outcome	Third-party network access contracts*	The sum of network access contracts between third-party suppliers and the transmission system operator	Number	None	Contracts between third-party suppliers and the transmission system operator	BART	Quarterly	
Lowered contracted power pricing	N A	Outcome	kWh price in power purchase agreements	Sum of the average price per kWh determined in each PPA in force divided by Total Number of PPA in force. The average price per kWh is equal to the price per kWh	CFA Francs	None	Power Purchase Agreements or "Rapport	Senelec or CRSE	Quarterly	Result related to both the Sector Governance and MPE planning sub-activities.

Reform Project										
Results Statement	**CI**	**Level**	**Indicator Name**	**Definition**	**Unit**	**Disagg.**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
KEY TARGETED RESULT				if the PPA has a fixed rate. If the price varies over time, the average is calculated based on the current year.			mouvement d'énergie"			
Reduced cost of electricity for eligible clients	N A	Outcome	Power price in third-party access purchase agreements*	Percentage difference between the average kWh price the buyers of the purchase agreements (TSO or other clients) paid prior to third-party network access and the average price per kWh in all active third-party access power purchase agreements.	Percentag e	None	Power Purchase Agreement	CRSE focal point/MPE focal point	Annual	The power price may not necessarily decrease, because the quality of electricity may warrant a higher price. So, it's more about value, and not just price.
Increased transparency of functional entities' costs	N A	Outcome	Cost transparency index*	Percentage of survey respondents stating that functional entities' costs are 'transparent' or 'very transparent'	Percentag e	None	Qualitative interview data	Baseline study consultant	Semi-Annual	The transparency criteria can be defined later to have a quantitative transparency index
Increase in planned funds to address sector needs	N A	Outcome	Planned funds to sector*	Amount of planned funds to sector in a year	CFA Francs	None	Public consultation document	CRSE	Annual	
Increased in investments	N A	Outcome	Sector investment*	Total amount of investment	CFA Francs	None	Public consultation document	CRSE	Annual	
Improved cost-recovery and sustainable cash flow of electricity sector companies	N A	Outcome	Compensatio n recovery rate*	The sum of payments made by the GoS to Senelec related to compensation in a calendar year divided by the Total amount to paid	Percentag e	None	Extract from Senelec financial statement showing payment receipt	Energy Support Fund (FSE)	Quarterly	
Adjusted cost of service	N A	Outcome	Required revenue *	Maximum Authorized Revenue	CFA Francs	None	CRSE decision on the maximum authorized revenue	CRSE	Annual	This indicator is related to both "Sustainable required revenue levels allowed to licensees"
Improved and focused	N A	Outcome	Overall performance*	It is a measure of the sustainability of the companies	Percentag e	Senelec /CER	Financial statements of	CRSE or Senelec	Annual	

Reform Project										
Results Statement	**CI**	**Level**	**Indicator Name**	**Definition**	**Unit**	**Disagg.**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
management for functional entities				(Senelec and concessionaire), translated in terms of reported net income to its products. It is calculated by the following formula: Net income / Total general products			Senelec and concessionaires			
Electricity code and decrees adopted	NA	Output	Date of promulgation of the electricity code	Date at which the decree on the electrical code is published in the official journal	Date	None	Publication in the government's official journal	Strategy and regulation department (DSR)/MPE	Once	
Application texts adopted	NA	Output	Date of adoption of application texts	Date at which the decree on application texts is published in the official journal	Date	None	Publication in the government's official journal	DSR/MPE	Once	
Senelec's functional unbundling completed	NA	Output	Date of preparation of the financial statements by the various subsidiaries	Date at which the first financial statements of the subsidiaries are prepared	Date	None	Separate financial statements from unbundled entities	Senelec Focal Point	Once	
Senelec's functional unbundling completed	NA	Output	Date of completion of the unbundling	Date at which the legal acts allowing utility unbundling with the public subsidiaries being under a holding company	Date	None	Copy of legal acts	MCA Reform Project Lead	Once	Financial unbundling is a pre-condition for functional unbundling. According to the contrat de performance 2021-2023, financial unbundling should be done by within 12 months (i.e., December 2021)
Transmission System Operator (TSO) Created and Operationalized	NA	Output	TSO Operational	Date at which the TSO has an allocated budget	Date	None	Copy of TSO's annual budget	TSO Director General	Once	This result is also related to regulatory substance sub-activity
Ministry Capacity and Sector Planning Sub-Activity (Sector Governance Activity)										
Increased capacity in business plan development,	NA	Outcome	Numbers of business plan developed	Number of business plans developed with the assistance of MCC	Number	None	Business plan developed	ASER focal point	Quarterly	This definition will be completed with

Reform Project										
Results Statement	**CI**	**Level**	**Indicator Name**	**Definition**	**Unit**	**Disagg.**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
environmental compliance, and the roll-out of single-phase technology and smart metering to support tariff harmonization										capacity building conception.
Increased private sector participation in rural electrification	N A	Outcome	Number of private firms in rural electrification*	Total number of private firms in rural electrification	Number	None	TBD	ASER focal point	Annual	
MPE Capacity Building Plan for Integrated Planning Developed	N A	Output	MPE capacity building plan for integrated planning developed	Date at which the MPE Capacity Building Plan receives formal acceptance from MCC and MCA	Date	None	TBD	MPE/SPE/CEP	Once	
MPE Capacity Building Plan for Integrated Planning Developed	N A	Output	MPE staff trained in integrated planning	Number of MPE staff members trained in integrated planning with the assistance of MCC	Number	Sex (Male, Female)	Consultant Report	Consultant	Quarterly	
Affermage transition plan developed	N A	Output	Affermage transition plan	Date at which the affermage transition plan is developed and adopted	Date	None	Copy of affermage transition plan	TBD/MPE	Once	
Integrated investment plan framework adopted	N A	Output	Adoption of an integrated investment plan framework	Date at which the integrated investment plan framework is adopted and approved by the President of the Republic of Senegal.	Date	None	Publication in the government's official journal	TBD/MPE	Once	Result related to both the Legal and sector Framework, MPE planning and regulatory substance sub-activities.
Energy sector development policy letter (LPDSE) 2024-2029 developed	N A	Output	LPDSE 2024-2029	Date the 2024-2029 LPDSE is developed	Date	None	Copy of the LPDSE	TBD/MPE	Once	
Training and support program for ASER completed	N A	Output	Number of people trained in preparation of business plans	Number of ASER workers, rural operator, specifically operator of off grid trained in developing business plans with the assistance of MCC	Number	Sex (Male, Female)	Attestation of training	ASER	Quarterly	
Private Sector Participation Sub-Activity (Sector Governance Activity)										

Reform Project										
Results Statement	**CI**	**Level**	**Indicator Name**	**Definition**	**Unit**	**Disagg.**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
Reduced application processing times	NA	Outcome	Application processing time*	Number of days between the receipt and processing of requests submitted to the "one-stop shop"	Days	None	One-stop shop database	One-stop shop focal point	Annual	
Increased number of approved projects	NA	Outcome	Number of approved projects*	Total of number of approved projects in a year	Number	None	Approved projects	TBD/MPE	Quarterly	
More private sector participation in all segments **KEY TARGETED RESULT**	NA	Outcome	Private sector participation in electricity generation	Electricity generation from privately-owned generation assets in one year divided by total generation	Percentage	None	EMS	DANQS	Annual	
Reduced burden on public finances	NA	Outcome	Number of sovereign guarantees	Annual statement of sovereign guarantees signed by the State for Senelec	CFA Francs	None	Official journal of the prime minister's office	Energy support fund (FSE)	Quarterly	
Reduced burden on public finances	NA	Outcome	Average volume of sovereign guarantees	Amount of annual sovereign guarantees signed by the State for Senelec / Total number of sovereign guarantees in the year	CFA Francs	None	TBD	Energy support fund (FSE)	Quarterly	
Increased cash flow for public rural investments	NA	Outcome	Cash flow for public rural investments*	Total amount of public investment for rural electrification	CFA Francs	Plant ownership (Senelec Rural/CER)	TBD	TBD/MPE	Annual	
One-stop-shop ("Guichet Unique") established	NA	Output	One-stop-shop established	The date at which an online guichet unique, serving as a "one-stop shop", for existing and new private companies seeking to invest in the sector is functional	Date	None	Functional web page of the guichet unique	TBD/MPE	Once	
Electricity sector investor guide developed	NA	Output	Date of preparation of the investor's guide to the electricity sector	Date at which the electricity sector investor guide is developed	Date	None	Copy of the investor guide	Consultant or implementing entity responsible for developing the investor guide	Once	
IPP/PSP procurement framework developed	NA	Output	IPP solicitation framework	Date at which the IPP/PSP procurement framework is formally validated by the Government of Senegal	Date	None	Copy of IPP solicitation framework	Consultant or implementing entity responsible	Once	This result is also related to regulatory substance sub-activity

Reform Project										
Results Statement	**CI**	**Level**	**Indicator Name**	**Definition**	**Unit**	**Disagg.**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
								for developing the framework		
Ancillary services recommendations and plan adopted	N A	Output	Ancillary services plan	Date at which the ancillary services recommendations and plan is formally adopted by the Government of Senegal	Date	None	Copy of ancillary services recommendations and plan	GoS entity responsible for validating the plan	Once	
Market opening transition plan developed	N A	Output	Market opening transition plan	Dates at which the market opening transition plan is developed	Date	None	Copy of transition plan	TBD/MPE	Once	
Regulatory Governance Sub-activity (Regulatory Strengthening Activity)										
Regulatory governance Improved ***KEY TARGETED RESULT***	N A	Outcome	Regulatory governance index	TBD	Index	None	"Baseline Study" consultant's secure data server	Baseline study consultant	TBD	Frequency is twice. The definition will be determined by the baseline study consultant.
Regulatory powers expanded	N A	Outcome	Regulatory law and electricity code adopted	Date at which the electricity code and regulator law are adopted	Date	None	Publication in the government's official journal	DSR/MPE	Once	
Regulatory powers expanded	N A	Outcome	Regulatory power index*	It is a composite measure related to the expanded authorities of the regulator in the areas of integrated investment planning, hydrocarbon sub-sector, power purchase agreements, and tariff determination.	Index	None	"Baseline Study" consultant's secure data server	Baseline study consultant	TBD	Frequency is twice. The precise definition and calculation method will be determined by the baseline study consultant conducting the regulatory assessment.
Regulator's independence strengthened	N A	Outcome	Electricity regulatory index (Independence)*	The AfDB ERI defines independence as "Institutional, financial and operational autonomy amongst political authorities, stakeholders and regulators". It is calculated from four sub-indicators: independence from the powers of the executive and legislative, independent from the stakeholders and market participants, decisional independence, and financial and budgetary independence.	Number	None	AfDB ERI Report publicly available online	AfDB	Annual	

Reform Project										
Results Statement	**CI**	**Level**	**Indicator Name**	**Definition**	**Unit**	**Disagg.**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
Credibility, transparency, and predictability of regulator regulator's decisions improved	NA	Outcome	Transparency and predictability of decisions*	The average of the indicator scores for "transparency of decisions" and "predictability" included in the African Development Bank's Electricity Regulatory Index (ERI). The sub-indicators and methodological details are in the ERI report.	Number	None	Electricity Regulatory Index Report	AfDB	Annual	
Regulator's human, technical, and financial capacity increased	NA	Outcome	TBD	TBD	TBD	TBD	TBD	TBD	TBD	This result will be captured in the regulatory governance and substance indices.
Improved understanding of regulation's purpose and objectives	NA	Outcome	Customer and sector actors' understanding of regulation's purpose and objectives*	Percentage of survey respondents stating that they have a 'good' or 'very good' understanding of regulation's purpose and objectives	Percentage	Sex (Male, Female)	Electricity customer survey Sector stakeholder survey	"Baseline Study" consultant	Semi-annual	
Improved understanding of regulatory decisions	NA	Outcome	Customer and sectors actors' understanding of regulation decisions*	Percentage of survey respondents stating that they have a 'good' or 'very good' understanding of regulatory decisions	Percentage	Sex (Male, Female)	Electricity customer survey Sector stakeholder survey	"Baseline Study" consultant	Semi-annual	
New organizational structured for CRSE Developed and Approved	NA	Output	New organizational framework for CRSE	Date at which CRSE adopts a new organizational framework in line with its strategic objectives developed with MCC assistance	Date	None	Application decree	Official journal	Once	
CRSE career development plan developed	NA	Output	CRSE staff development plan completed	Date at which CRSE adopts a staff development plan developed with MCC assistance	Date	None	Signed copy of minutes of the career development plan validation workshop	CRSE focal point	Once	
Law on the regulator passed	NA	Output	Date of promulgation of the law on the regulator	Date at which the decree on the law on the regulator is published in the official journal	Date	None	Publication in the government's official journal	DSR/MPE	Once	The reinforcement of regulation supporting cost, quality and access is related to approval of law on the regulator

Reform Project										
Results Statement	**CI**	**Level**	**Indicator Name**	**Definition**	**Unit**	**Disagg.**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
CRSE Communications plan developed	N A	Output	CRSE communications Plan	Date at which CRSE formally adopts the communication plan prepared with MCC support	Date	None	Signed copy of the minutes of the communications plan validation workshop	CRSE focal point	Once	
New recruits hired	N A	Output	New CRSE staff hired	Total number of new recruitments	Number	Sex (male, female)	Personnel file kept by the CRSE's HR Department	CRSE focal point	Annual	
Financial autonomy study completed	N A	Process	Financial autonomy study	Date at which the financial autonomy study is accepted by MCA Senegal II	Date	None	MCA Senegal II correspondence or proof of payment to consultant	MCA Reform Project Lead or MCA Finance Director	Once	
New salary recommendations proposed and made policy	N A	Process	Salary study	Date at which a study comparing CRSE staff salaries with individuals in similar sectors and competencies is completed and accepted by MCA Senegal II	Date	None	MCA Senegal II approval of study	MCA Reform Project Lead	Once	
Regulatory Substance Sub-activity Regulatory Strengthening Activity)										
Regulatory substance improved **KEY TARGETED RESULT**	N A	Outcome	Regulatory substance index*	TBD	Number	None	"Baseline Study" consultant's secure data server	Baseline study consultant	Twice	The definition will be determined by the baseline study consultant. The index will capture "improved monitoring of operator Performance", which is a key targeted result in the logic.
GoS compensation paid to Senelec in full and on time **KEY TARGETED RESULT**	N A	Outcome	GoS compensation timeliness	Number of days between CRSE's determination of the tariff ("gel du tarif") and the date when Senelec receives the Government compensation payments, including value-added tax (TVA)	Days	None	Tariff decision and Senelec financial statement showing payment receipt	FSE and Senelec	Annual	This indicator is also related to the "Sustainable cash flow due to reliable/timely payment by government to utility" result
GoS compensation paid to Senelec in full and on time	N A	Outcome	GoS debt recovery	(The total amount paid by the government to Senelec divided by the total amount that the	Percentage	None	Tariff decision and Senelec financial	FSE and Senelec	Annual	

Reform Project										
Results Statement	**CI**	**Level**	**Indicator Name**	**Definition**	**Unit**	**Disagg.**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
KEY TARGETED RESULT				government owes to Senelec) multiplied by 100			statement showing payment receipt			
Improved economic viability of the power sector **KEY TARGETED RESULT**	P14	Outcome	Cost-reflective tariff regime	Average tariff per kilowatt-hour / Long-run marginal cost per kilowatt-hour of electricity supplied to customers.	Percentage	None	Tariff decision	CRSE focal point	Annual	
Improved quality of data available to CRSE to measure performance	NA	Outcome	Quality data provided by the operators to CRSE*	Percentage of CRSE technical staff who state that the quality of data they receive from operators is good or very good.	Percentage	None	"Baseline Study" consultant's secure data server	Baseline study consultant	Twice	
Sector stakeholders engaged and sensitized on updated regulations and policy	NA	Outcome	Sector stakeholder understanding of new sector policies and regulations	Percentage of sector stakeholders who respond correctly to at least 75% of survey questions on new regulations and policies	Percentage	Sex (Male, Female)	"Baseline Study" consultant's secure data server	Evaluation consultant	Other	
Standard licenses, Affermage agreements and other regulations developed/ Updated	TBD	Outcome	TBD	TBD	TBD	TBD	TBD	TBD	TBD	The [regulatory] consultant should be determining the needed regulations on a rolling basis starting in the end of 2022
Tariff plan developed and adopted	NA	Outcome	Tariff plan adoption	Date at which the tariff plan is developed and adopted	Date	None	Tariff plan	TBD/MPE	Once	The tariff plan should include an updated tariff methodology, tariff blocks, rate design, revenue requirements, and treatment of electricity sector assets
Third party access contracts and documents drafted	NA	Output	Third party access contracts and documents drafted	Date at which Third Party Access Contracts and Documents Drafted	Date	None	MCA Senegal II correspondence or proof of payment to consultant	MCA Reform Project Lead or MCA Finance Director	Once	

Reform Project										
Results Statement	**CI**	**Level**	**Indicator Name**	**Definition**	**Unit**	**Disagg.**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
Grid audit completed	NA	Output	Date of completion of grid audit	Date at which the grid audit study is completed	Date	None	MCA Senegal II correspondence or proof of payment to consultant	MCA Reform Project Lead or MCA Finance Director	Once	
Tariff reform study completed	NA	Process	Tariff study completion	Date at which all deliverables from the Cost of Service and Tariff Methodology Study are accepted by MCA Senegal II	Date	None	MCA Senegal II correspondence or proof of payment to consultant	MCA Reform Project Lead or MCA Finance Director	Once	
Incentivizing Utility Performance Sub-Activity (Utility Strengthening Activity)										
Increased capacity in financial management	NA	Outcome	Senelec staff skills in financial management*	The indicator is estimated by the proportion (%) of Senelec staff members who have 'very good' or 'good' competency in financial management skills	Percentage	Sex (Male, Female)	"Baseline Study" consultant's secure data server	Evaluation consultant	Twice	The definition may be change or be refined by the consultant
Actions taken to improve key performance indicators	NA	Outcome	TBD	TBD	TBD	TBD	TBD	TBD	TBD	Actions taken will be defined when performance incentive program will be designed
Improved cost control and financial projections	NA	Outcome	Budget execution rate	[The sum of expenditures / The sum of projected expenditures] x 100.	Percentage	None	TBD	TBD	Annual	
Improve quality of service KEY TARGETED RESULT	NA	Outcome	TBD	TBD	TBD	TBD	TBD	TBD	TBD	Indicators will be defined when the performance incentive program is designed This result is one of three corresponding to the key targeted result: "Improved utility performance on select KPIs"
Commercial losses reduced **KEY TARGETED RESULT**	NA	Outcome	TBD	TBD	TBD	TBD	TBD	TBD	TBD	Same comment as above

Reform Project										
Results Statement	**CI**	**Level**	**Indicator Name**	**Definition**	**Unit**	**Disagg.**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
New connections Increased **KEY TARGETED RESULT**	N A	Outcome	TBD	TBD	TBD	TBD	TBD	TBD	TBD	Same comment as above
Drivers of weak performance identified	N A	Outcome	Date of identification of poor performance drivers	Date at which the consultant report on poor performance is accepted	Date	None	MCA Senegal II correspondence or proof of payment to consultant	MCA Reform Project Lead or MCA Finance Director	Once	
Resolutions to weak performance proposed to Utility Director General	N A	Outcome	Transmission date of poor performance recommendations to the Senelec Director General	Date at which the recommendations are transmitted to the Senelec Director General	Date	None	Transmission letter	MCA Director	Once	
Training and technical assistance to the Utility's Internal Audit Department	N A	Output	Senelec audit staff training	Number of Senelec agents who received training or technical assistance	Number	Sex (male, female)	Consultant report	Consultant	Annual	
Utility Performance Program Established	N A	Process	Performance incentive program	Date at which a performance incentive program is established and approved by MCC.	Date	None	MCC correspondence accepting performance incentive program	Reform Team	Once	The requirements for the incentive program are included on Page 32 of the Compact.
Network Management Sub-Activity (Utility Strengthening Activity)[32]										
Improved GIS capability **KEY TARGETED RESULT**	N A	Outcome	Efficient GIS	TBD	Number	None	Consultant report	GIS Consultant	TBD	The definition will be defined by GIS Consultant
Improved GIS capability **KEY TARGETED RESULT**	N A	Outcome	Optimal management of GIS database	TBD	TBD	None	Consultant report	GIS Consultant	TBD	Definition will be done when the SIG activity is designed. It will focus on: (1) organization and human resources,

[32] The "Improved management of service interruptions" result is not included here since related indicators are included in the Transmission Project.

Reform Project										
Results Statement	**CI**	**Level**	**Indicator Name**	**Definition**	**Unit**	**Disagg.**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
										(2) work procedures (3) technology, (4) data availability, and (5) equipment.
Improved management of network assets **KEY TARGETED RESULT**	P13	Outcome	Maintenance expenditure-asset value ratio	Actual maintenance expenditures / Total value of fixed assets.	Percentage	MV/LV	TBD	TBD	Annual	
Reduced technical losses due to poorly maintained network	NA	Outcome	Technical losses due to poorly maintained network	TBD	Kilowatt hours	None	EMS	DANQS	Annual	The indicator will be confirmed by Senelec according to the measurability
Improved planning of maintenance and transmission network expansion	NA	Outcome	Number of malfunctions on HTA lines per 100 km of HTA lines	Number of malfunctions on HTA lines per 100 km of HTA lines	Number	None	TBD	Senelec Focal Point	Quarterly	
Optimizing regional integration of the TX network	NA	Outcome	Amount of energy imported or exported	The total megawatt hours of electricity imported or exported	Megawatt hours	Imported /exported	TBD	DANQS	Quarterly	
Improved management of network assets **KEY TARGETED RESULT**	NA	Output	Number of Senelec agents trained in managing the assets of the MV network / BT	The sum of all qualified Senelec agents in managing the assets of the MV network / BT after a capacity building with the assistance of MCC.	Number	Sex (male, female)	TBD	Reform Team	Quarterly	
GIS is operational	NA	Output	GIS completeness	Percentage of network assets included in Senelec's GIS database	Percentage	None	TBD	TBD	Annual	
Geo-spatial mapping of the network is completed	NA	Output	Geo-spatial mapping of the network	Date geo-spatial mapping of the network is fully realized	Date	None	Document from Reform team	Reform Team	Once	
The MV network GIS is functional	NA	Output	Functional GIS of MV/LV network	Date at which a consultant confirms the MV network GIS is functional. This includes the establishment of a database,	Date	None	GIS consultant report	GIS consultant	Once	

Reform Project										
Results Statement	**CI**	**Level**	**Indicator Name**	**Definition**	**Unit**	**Disagg.**	**Primary Data Source**	**Responsible Party**	**Frequency of Reporting**	**Additional Information**
				provision of training, acquisition of material, and imaging performed						
The staff of the future transmission system operator is trained and equipped	N A	Output	Number of employees trained in the computerized maintenance management system (CMMS)	The sum of Senelec employees who attended at least one training on the CMMS	Number	Sex (male, female)	Document from Reform team	Reform Team	Quarterly	
The staff of the future transmission system operator is trained and equipped	N A	Output	Date of completion of the extension of the CMMS	Date of completion of the extension of the CMMS mobile applications for field technicians is made	Date	None	Document from Reform team	Reform Team	Once	
Improved economic dispatching model	N A	Output	Setup of new dispatching model	Date at which all software and tools for the new dispatch model are established and functional	Date	None	Document from Reform team	Reform Team	Once	The required dispatching tools will be defined with design consultant

Results in the Reform logic we do not intend on measuring:

Result	Indicator	Justification
Ministry Capacity and Sector Planning Sub-Activity (Under Sector Governance)		
Optimized access strategy in peri-urban and rural zones		*Affermage* will be implemented after end of the Compact. Results could be measured during independent evaluation
Funding needs better identified for realistic rural electrification plans		The realistic of rural electrification plans will be included in PIMC tool related to criteria of investment choosing.
Higher quality partners and services procured		
Private Sector Participation Sub-Activity (under Sector Governance)		
Capable private sector operators for rural distribution procured		Private participation in distribution is planned as part of the affermage that will take place after the Compact. The result could be included in impact evaluations
Regulatory Governance Sub-activity (under Regulatory Strengthening Activity)		
Increased promotion of the rational development of the supply of electricity		All this result related to “Regulator fulfills its mandate” are already measured with indicators related to “electricity supply”, “economic viability”, “quality, cost and supply electrical energy” and “private
Improved economic and financial balance of the electricity sector		

Increased protection of consumer rights with respect to the price, supply and quality of electrical energy		sector participation in generation, transmission and distribution of electrical energy.
Increased promotion of competition and private sector participation in the generation, transmission, distribution and sale of electrical energy		
Regulatory Substance Sub-activity (Regulatory Strengthening Activity)		
Demand efficiency incentivized		We will not measure these results which are already in tables related to the following indicators: “induced demand”, “new connections”, “operators’ revenue”, “KPI related to performance incentivized”, “private sector participation”, “Net return on equity” and “cost recovery”
New connections incentivized		
Sustainable funding of revenue enabled		
Sufficient cash flow of operators enabled		
Improved operational performance incentivized		
Private sector participation incentivized		
Capital efficiency incentivized		
Operational efficiency incentivized and improved cost recovery		

ANNEX II: Table of Indicator Baselines and Targets

Transmission Project

Transmission Project												
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification**	**Baseline**	***Baseline Source and Year***	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024-Sept 2025**	**Oct 2025-Sept 2026**	**End of Compact Target**	***Target Source and comments***
Project-level												
Outcome	Number of load shedding events experienced by customers **(OBJECTIVE-LEVEL)**	Number	Level (cumulative)	565	Source : Rapport Mouvement d'Energies (2019), P20 Year : 2019	TBD	TBD	TBD	TBD	TBD	TBD	TBD
	(Manual)	Number	Level (cumulative)	228	Source : Rapport Mouvement d'Energies (2019), P21 Year : 2019	TBD	TBD	TBD	TBD	TBD	TBD	TBD
	(Automatic)	Number	Level (cumulative)	337	Source : Rapport Mouvement d'Energies (2019), P21 Year : 2019	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Outcome	Total non-distributed energy on the network **(OBJECTIVE-LEVEL)** (Low voltage)	Megawatt hours	Level (cumulative)	16,875	Source : Rapport Mouvement d'Energies Page 25 (Tableau 12) Year : 2019	14,000	13,000	12,000	11,000	TBD	TBD	2021-2023 source: Senelec performance contract 2024-2025 values assume continuation of trend per DQR report recommendation
	(LV)	Megawatt hours	Level (cumulative)	TBD	Source : Rapport Mouvement d'Energies (Tableau 12) Year : 2019	NA	NA	NA	NA	NA	NA	NA
	(MV)	Megawatt hours	Level (cumulative)	TBD	Source : Rapport Mouvement d'Energies	NA	NA	NA	NA	NA	NA	NA

Transmission Project												
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification**	**Baseline**	***Baseline Source and Year***	**Sept 2021- Sept 2022**	**Oct 2022- Sept 2023**	**Oct 2023- Sept 2024**	**Oct 2024- Sept 2025**	**Oct 2025- Sept 2026**	**End of Compact Target**	***Target Source and comments***
					(Tableau 12) Year : 2019							
	(HV)	Megawatt hours	Level (cumulative)	TBD	Source : Rapport Mouvement d'Energies (Tableau 12) Year : 2019	NA	NA	NA	NA	NA	NA	NA
Outcome	System Average Interruption Duration Index (SAIDI)*	Hours	Level	10.15	Performance contract 2021-2023 Page 36 Year: 2019	4.5	4.00	3.50	3.00	TBD	TBD	2021-2023 source: Senelec performance contract 2024-2025 values assume continuation of trend per DQR report recommendation
Outcome	System Average Interruption Frequency Index (SAIFI)*	Rate	Level	11.13	Performance Contract 2021-2023, Page 36 year: 2019	5.50	5.00	4.50	4.00	TBD	TBD	2021-2023 source: Senelec performance contract 2024-2025 values assume continuation of trend per DQR report recommendation (P89)
Outcome	Customer perception of service quality*	Percentage	Level	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study
	(Voltage level)											
	(LV domestic)	Percentage	Level	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study
	(LV business)	Percentage	Level	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study
	(MV)	Percentage	Level	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study

Transmission Project												
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification**	**Baseline**	***Baseline Source and Year***	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024-Sept 2025**	**Oct 2025-Sept 2026**	**End of Compact Target**	***Target Source and comments***
	(HV)	Percentage	Level	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study
	(Plant ownership)											
	(Senelec)	Percentage	Level	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study
	(CER)	Percentage	Level	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study
Outcome	Customers experiencing at least one service interruption* **(OBJECTIVE-LEVEL)**	Percentage	Level (average)	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study
	(Voltage level)											
	(LV domestic)	Percentage	Level	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study
	(LV business)	Percentage	Level	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study
	(MV)	Percentage	Level	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study
	(HV)	Percentage	Level	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study
	(Plant ownership)											
	Senelec	Percentage	Level	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study

Transmission Project												
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification**	**Baseline**	***Baseline Source and Year***	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024-Sept 2025**	**Oct 2025-Sept 2026**	**End of Compact Target**	***Target Source and comments***
	CER	Percentage	Level	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study
Outcome	Average number of service interruptions experienced* **(OBJECTIVE-LEVEL)**	Number	Level (average)	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study
	(Voltage level)											
	(LV domestic)	Number	Level (average)	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study
	(LV business)	Number	Level (average)	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study
	(MV)	Number	Level (average)	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study
	(HV)	Number	Level (average)	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study
	(Plant ownership)											
	Senelec	Percentage	Level	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study
	CER	Percentage	Level	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study
Outcome	Average duration of service interruptions experienced* **(OBJECTIVE-LEVEL)**	Hours	Level (average)	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study

Transmission Project												
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification**	**Baseline**	***Baseline Source and Year***	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024-Sept 2025**	**Oct 2025-Sept 2026**	**End of Compact Target**	***Target Source and comments***
	(Voltage level)											
	(LV domestic)	Hours	Level (average)	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study
	(LV business)	Hours	Level (average)	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study
	(MV)	Hours	Level (average)	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study
	(HV)	Hours	Level (average)	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study
	(Plant ownership)											
	Senelec	Percentage	Level	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study
	CER	Percentage	Level	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study
Outcome	Average kWh generation cost **(OBJECTIVE-LEVEL)**	CFA Francs	Level (average)	61.61	Rapport Mouvement d'énergie Page 15 Year : 2019	54.06	52.72	51.42	50.15	48.85	48.85	DQR report, deliverable 2c, P89
	(Fuel)	CFA Francs	Level (average)	TBD	Rapport Mouvement d'énergie Page 15 Year : 2019	NA	NA	NA	NA	NA	NA	
	(Coal)	CFA Francs	Level (average)	TBD	TBD	NA	NA	NA	NA	NA	NA	
	(Solar)	CFA Francs	Level (average)	TBD	TBD	NA	NA	NA	NA	NA	NA	

Transmission Project												
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification**	**Baseline**	***Baseline Source and Year***	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024-Sept 2025**	**Oct 2025-Sept 2026**	**End of Compact Target**	***Target Source and comments***
	(Wind)	CFA Francs	Level (average)	TBD	TBD	NA	NA	NA	NA	NA	NA	
	(Hydro)	CFA Francs	Level (average)	TBD	TBD	NA	NA	NA	NA	NA	NA	
	(Gas)	CFA Francs	Level (average)	TBD	TBD	NA	NA	NA	NA	NA	NA	
Process	Temporary employment generated in power infrastructure construction	Number	Cumulative	0	Source: NA Year: 2021	NA	NA	NA	NA	NA	NA	Targets for this indicator cannot be determined
	(sex)											
	(Female)	Number	Cumulative	0	Source: NA Year: 2021	NA	NA	NA	NA	NA	NA	Targets for this indicator cannot be determined
	(Male)	Number	Cumulative	0	Source: NA Year: 2021	NA	NA	NA	NA	NA	NA	Targets for this indicator cannot be determined
	(Labor source)											
	(Foreign)	Number	Cumulative	0	Source: NA Year: 2021	NA	NA	NA	NA	NA	NA	Targets for this indicator cannot be determined
	(Local)	Number	Cumulative	0	Source: NA Year: 2021	NA	NA	NA	NA	NA	NA	Targets for this indicator cannot be determined
	(Skill level)											
	(Skilled)	Number	Cumulative	0	Source: NA Year: 2021	NA	NA	NA	NA	NA	NA	Targets for this indicator cannot be determined
	(Semi-skilled)	Number	Cumulative	0	Source: NA Year: 2021	NA	NA	NA	NA	NA	NA	Targets for this indicator cannot be determined
	(Un-skilled)	Number	Cumulative	0	Source: NA Year: 2021	NA	NA	NA	NA	NA	NA	Targets for this indicator cannot be determined
Transmission Network Build-Out Activity												
Outcome	Additional energy transmitted and distributed in the Dakar peninsula **(OBJECTIVE-LEVEL)**	Megawatt hours	Level (Cumulative)	0	Source: NA Year: 2021	0	245 981	565 141	850 649	1 141168	1 141168	2021 MCC ERR Senegal II act 3100 feasibility study

Transmission Project												
Indicator Level (II)	Indicator Name (II)	Unit of Measure (II)	Indicator Classification	Baseline	*Baseline Source and Year*	Sept 2021-Sept 2022	Oct 2022-Sept 2023	Oct 2023-Sept 2024	Oct 2024-Sept 2025	Oct 2025-Sept 2026	End of Compact Target	*Target Source and comments*
Output	Kilometers of transmission lines upgraded or built	Kilometers	Cumulative	0	Source: NA Year: 2021	0	20	45.5	45.5	45.5	45.5	2018, WSP Feasibility study chap 3 "Activité 3100 Développement à long terme du réseau HT autour de Dakar" Page 48-49
	(Undersea)	Kilometers	Cumulative	0	Source: NA Year: 2021	0	0	18.5	18.5	18.5	18.5	
	(Underground)	Kilometers	Cumulative	0	Source: NA Year: 2021	0	20	27	27	27	27	
Output	Transmission throughput capacity added	Megawatts	Level	0	Source: NA Year: 2021	0	385	1925	1925	1925	1925	2018, WSP Feasibility study chap 3 Page 85
Output	Number of substations constructed or expanded	Number	Cumulative	0	Source: NA Year: 2021	0	0	3	3	3	3	2018, WSP Feasibility study chap 3 Page 48-49 New substations in Bel Air and Cap des Biches and expansion of Kounoune.
	(Constructed)	Number	Cumulative	0	Source: NA Year: 2021	0	0	TBD	TBD	TBD	TBD	
	(Expanded)	Number	Cumulative	0	Source: NA Year: 2021	0	0	TBD	TBD	TBD	TBD	
Output	Number of transformers added	Number	Cumulative	0	Source: NA Year: 2021	0	0	4	4	4	4	2018, WSP Feasibility study chap 3 Page 48-49
Output	Transmission substation capacity added	Megavolt ampere	Cumulative	0	Source: NA Year: 2021	0	0	600	600	600	600	Cap des biches 2x 150 + Bel-Air 2 x 150 = 600 MVA
Transformer Replacement Activity												
Outcome	Additional energy transmitted from added transformers **(OBJECTIVE-LEVEL)**	Megawatt hours	Level (Cumulative)	0	Source: NA Year: 2021	33,247	71,682	127,768	241,108	360,745	360,745	2021, MCC's revised ERR model. "mcc-err-Senegal II-Act.3400 Feasibility Studies Energy

Transmission Project												
Indicator Level (II)	Indicator Name (II)	Unit of Measure (II)	Indicator Classification	Baseline	*Baseline Source and Year*	Sept 2021-Sept 2022	Oct 2022-Sept 2023	Oct 2023-Sept 2024	Oct 2024-Sept 2025	Oct 2025-Sept 2026	End of Compact Target	*Target Source and comments*
												Project_close_initial"
	(Touba)	Megawatt hours	Level (Cumulative)	0	Source: NA Year: 2021	0	0	0	5 382	6 345	6 345	2021, MCC's revised ERR model. "mcc-err-Senegal II-Act.3400 Feasibility Studies Energy Project_close_initial"
	(Diass)	Megawatt hours	Level (Cumulative)	0	Source: NA Year: 2021	0	0	0	0	5 382	5 382	2021, MCC's revised ERR model. "mcc-err-Senegal II-Act.3400 Feasibility Studies Energy Project_close_initial"
	(Hann)	Megawatt hours	Level (Cumulative)	0	Source: NA Year: 2021	0	7 054	27 555	95 721	166 007	166 007	2021, MCC's revised ERR model. "mcc-err-Senegal II-Act.3400 Feasibility Studies Energy Project_close_initial"
	(Aeroport)	Megawatt hours	Level (Cumulative)	0	Source: NA Year: 2021	33 247	64 628	100 213	140 006	183 009	183 009	2021, MCC's revised ERR model. "mcc-err-Senegal II-Act.3400 Feasibility Studies Energy Project_close_initial"
Outcome	Substation overloading	Percentage	Level	101%	WSP Feasibility study. Chapter 5. Page 8	TBD	TBD	TBD	TBD	TBD	TBD	

Transmission Project												
Indicator Level (II)	Indicator Name (II)	Unit of Measure (II)	Indicator Classification	Baseline	*Baseline Source and Year*	Sept 2021-Sept 2022	Oct 2022-Sept 2023	Oct 2023-Sept 2024	Oct 2024-Sept 2025	Oct 2025-Sept 2026	End of Compact Target	*Target Source and comments*
	(Touba)	Percentage	Level	99%	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
	(Diass)	Percentage	Level	103%	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
	(Hann)	Percentage	Level	100.81%	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
	(Aeroport)	Percentage	Level	100.88%	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
Outcome	Transformer losses*	Percentage	Level	2%	Source: "mcc-err-Senegal II-Act.3400 Feasibility Studies Energy Project_close_initial"	2%	2%	2%	2%	2%	2%	MCC's revised ERR model. "mcc-err-Senegal II-Act.3400 Feasibility Studies Energy Project_close_initial"
Output	Number of transformers upgraded or replaced (Transformer Replacement Activity)	Number	Cumulative	0	Source: NA Year: 2021	1	2	2	3	5	5	MCC's revised ERR model. "mcc-err-Senegal II-Act.3400 Feasibility Studies Energy Project_close_initial"
Output	Transmission substation capacity added (Transformer Replacement Activity)	Megavolt ampere	Cumulative	0	Source: NA Year: 2021	80	160	160	240	400	400	Diass 2x80 + Touba 80 + Hann 80 + Aéroport 80 = 400 MVA
Grid Stabilization Activity												
Outcome	Electricity from intermittent sources	Percentage	Level	6.85%	Rapport mouvement d'énergie 2019, tableau 2	TBD	TBD	TBD	TBD	TBD	TBD	Generation projections per energy source are required for targets
Outcome	Capacity factor of solar energy power plants*	Percentage	Level	12.88%	Numerator is from page 10 of Senelec's « rapport mouvement d'énergie	TBD	TBD	TBD	TBD	TBD	TBD	According to "Using wind and solar to reliably meet the electricity demand" (USAID Greening the Grid

Transmission Project												
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification**	**Baseline**	***Baseline Source and Year***	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024-Sept 2025**	**Oct 2025-Sept 2026**	**End of Compact Target**	***Target Source and comments***
					2019 » and the denominator is from page 12 of chapter of the WSP feasibility study							Initiative), typical capacity factors for wind and solar photovoltaics (PV) in regions with good resources are about 30–50% and 15–20%, respectively.
Outcome	Capacity factor of wind energy power plants*	Percentage	Level	6.09%	Numerator is from page 10 of Senelec's « rapport mouvement d'énergie 2019 » and the denominator is from page 12 of chapter of the WSP feasibility study	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Outcome	Intermittent energy curtailment*	Megawatt hours	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
Outcome	Voltage stability*	Percentage	Level	TBD	TBD	90%	90%	90%	90%	90%	90%	Senelec focal point
Outcome	Frequency stability*	Percentage	Level	59,30%	Source : Rapport mouvement d'énergie 2019, P 42. Paragraph 6.2 Year: 2019	70%	70%	70%	70%	70%	70%	Rapport mouvement d'énergie 2019 Page 44
Outcome	Ratio of total battery capacity to required operating reserve capacity	Percentage	Level	0	Source: NA Year: NA	100	100	100	100	100	100	Senelec Synchronous Reserve Strategy

Transmission Project												
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification**	**Baseline**	***Baseline Source and Year***	**Sept 2021- Sept 2022**	**Oct 2022- Sept 2023**	**Oct 2023- Sept 2024**	**Oct 2024- Sept 2025**	**Oct 2025- Sept 2026**	**End of Compact Target**	***Target Source and comments***
Outcome	Power generation capacity equipped with speed and voltage regulator*	Percentage	Level	0%	Source : Mise_en_mode_automatique Dec 1, 2021 Year: 2019	20.5%	33.5%	37.7%	50.4%	56.8%	56.8%	"Mise_en_mode_automatique Dec 1, 2021" developed by MCC/M&E and WSP.
	(Private)	Percentage	Level	0%	Source: NA Year: 2019	18%	37%	43%	60%	70%	70%	
	(Public)	Percentage	Level	0%	Source: NA Year: 2019	26%	26%	26%	26%	26%	26%	
Outcome	Number of batteries installed	Number	Cumulative	0	Source: NA Year: 2019	2	2	2	2	2	2	Senelec synchonrous reserve strategy (april 2019)
Outcome	Battery storage capacity installed	Megavolt ampere	Cumulative	0	Source: NA Year: 2019	80	80	80	80	80	80	The target is from the CBA model, which assumed the 80 MW in battery storage would be operational in 2021. The plan was for the Compact to directly fund 30 MW at Belair 90 kv substation and for the remaining 50MW to be funded by the private sector.
Outcome	Execution rate of the operating reserve strategy*	Percentage	Level	0%	Source: NA Year: 2019	TBD	100.00%	100.00%	100.00%	100.00%	100.00%	Senelec synchonrous reserve strategy P12 Tableau : liste des activités de la stratégie de réserve d'exploitation
Outcome	Least-cost generation*	Percentage	Level (average)	15%	Rapport Mouvement d'énergie 2019 Pages 11 et 14	TBD	TBD	TBD	TBD	TBD	TBD	TBD

Transmission Project												
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification**	**Baseline**	***Baseline Source and Year***	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024-Sept 2025**	**Oct 2025-Sept 2026**	**End of Compact Target**	***Target Source and comments***
Outcome	Thermal generation capacity development*	Percentage	Level	75%	Rapport mouvement d'énergie 2019 P10	TBD	TBD	TBD	TBD	TBD	TBD	Livrable 4 Macroconsulting P118
	(Private)	Percentage	Level	TBD	TBD	NA	NA	NA	NA	NA	NA	
	(Public)	Percentage	Level	TBD	TBD	NA	NA	NA	NA	NA	NA	
Output	Adoption date of operating reserve strategy	Date	Date	NA	Source: NA Year: 2021	NA	NA	NA	NA	NA	NA	Result achieved before EIF on April 29, 2019
Output	Date of receipt of remote load-shedding equipment	Date	Date	NA	Source: NA Year: 2021	5-Aug-2022	NA	NA	NA	NA	NA	MOSES Implementation Plan "MCAS-TR-MOS-PN-PLA-Planning Project Transport-IAP (V 08-jul-2021)"
Risk/Assumption	Quantity of energy injected on the network from the newly installed batteries	Megawatt hours	Level (cumulative) cumulative	0	Source: NA Year: 2021	80	80	80	80	80	80	Senelec Synchronous Reserve Strategy

Access Project

Access Project													
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification (II)**	**Baseline**	***Baseline Source and Year***	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024-Sept 2025**	**Oct 2025-Sept 2026**	End of Compact Target	Target Source and comments	Notes
Outcome	Electricity consumption for domestic use **(OBJECTIVE-LEVEL)**	Megawatt hours	Level (cumulative)	0	Source: NA Year: 2018	0	0	2150	2211	2273	2273	WSP Feasibility study ERR model	MCC model ERR's adoption rate are based on WSP's estimation.
	(Tambacounda)	Megawatt hours	Level (cumulative)	0	Source: NA Year: 2018	0	0	186	193	200	200	WSP Feasibility study ERR model, 2018	
	(Foundiougne)	Megawatt hours	Level (cumulative)	0	Source: NA Year: 2018	0	0	1212	1244	1277	1277	WSP Feasibility study ERR model, 2018	
	(Nioro; Bounkiling et Medina Yoro Foula)	Megawatt hours	Level (cumulative)	0	Source: NA Year: 2018	0	0	584	601	617	617	WSP Feasibility study ERR model, 2018	
	(Velingara)	Megawatt hours	Level (cumulative)	0	Source: NA Year: 2018	0	0	168	173	179	179	WSP Feasibility study ERR model, 2018	
Outcome	Electricity consumption for productive use **(OBJECTIVE-LEVEL)**	Megawatt hours	Level (cumulative)	0	Source: NA Year: 2018	0	0	2721	2810	2900	2900	WSP Feasibility study ERR model	MCC model ERR's adoption rate is based on WSP's estimation.
	(Tambacounda)	Megawatt hours	Level (cumulative)	0	Source: NA Year: 2018	0	0	1438	1491	1545	1545	WSP Feasibility study ERR model	
	(Foundiougne)	Megawatt hours	Level (cumulative)	0	Source: NA Year: 2018	0	0	829	851	874	874	WSP Feasibility study ERR model	
	(Nioro, Bounkiling et Medina Yoro Foula)	Megawatt hours	Level (cumulative)	0	Source: NA Year: 2018	0	0	353	363	373	373	WSP Feasibility study ERR model	
	(Velingara)	Megawatt hours	Level (cumulative)	0	Source: NA Year: 2018	0	0	102	105	108	108	WSP Feasibility study ERR model	
Distribution Network Reinforcement Activity													
Outcome	Distribution system losses	Percentage	Level	16,25%	Source: Loss study by MacroConsulting	TBD	TBD	TBD	TBD	TBD	TBD	TBD	

Access Project													
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification (II)**	**Baseline**	***Baseline Source and Year***	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024-Sept 2025**	**Oct 2025-Sept 2026**	End of Compact Target	Target Source and comments	Notes
					Deliverable 7 Page 22 Year: 2018								
Outcome	System Average Interruption Duration Index (SAIDI) in MCC intervention areas *	Hours	Level	0	Source: NA Year: 2018	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
Outcome	System Average Interruption Frequency Index (SAIFI) in MCC intervention areas *	Number	Level	0	Source: TBD Year: TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
Outcome	Avoided technical losses	Kilowatt hours	Cumulative	0	Source: NA Year: 2018	NA	NA	NA	3791.8	3791.8	3791.8	WSP Feasibility Study for Activity 3800-3900	
Outcome	Non-distributed energy on the distribution network	Megawatt hours	Level (cumulative)	15 838	Source: Energy Movement Report (Table 12) Year: 2019	TBD	TBD	TBD	TBD	TBD	TBD		
Outcome	Customer satisfaction index*	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Sex)	Percentage	Level (average)										
	(Male)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Female)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	Plant ownership												
	(Senelec)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(CER)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	

Access Project													
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification (II)**	**Baseline**	***Baseline Source and Year***	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024-Sept 2025**	**Oct 2025-Sept 2026**	End of Compact Target	Target Source and comments	Notes
	(Customer type)												
	(Household)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Business)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
Outcome	Customer confidence index*	Percentage	Level (average)	TBD	Source: Baseline study Year: 2021	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Sex)	Percentage	Level (average)										
	(Male)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Female)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	Plant ownership												
	(Senelec)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(CER)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Customer)												
	(Household)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(businesses)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
Output	Switches installed	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	126	126	126	Design study	The target values for

Access Project													
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification (II)**	**Baseline**	***Baseline Source and Year***	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024-Sept 2025**	**Oct 2025-Sept 2026**	End of Compact Target	Target Source and comments	Notes
													2023 and 2024 will be determined after the design studies are finalized.
	(Remote-controlled three-pole)	Number	Cumulative	0	Source: NA Year: 2018	N/A	N/A	TBD	TBD	TBD	TBD	Design study	
	(Voltage dip breaking (IACT))	Number	Cumulative	0	Source: NA Year: 2018	N/A	N/A	TBD	TBD	TBD	TBD	Design study	
	(Manual control)	Number	Cumulative	0	Source: NA Year: 2018	N/A	N/A	TBD	TBD	TBD	TBD	Design study	
Output	Attachments between radial lines sections	Kilometers	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	133.2	133.2	133.2	Design study	The target values for 2023 and 2024 will be determined after the design studies are finalized.
Output	Fault indicators with tele-indication	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	348	348	348	Design study	The target values for 2023 and 2024 will be determined after the design studies are finalized.
Output	Remote-controlled recloser circuit breakers	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	62	62	62	Design study	The target values for 2023 and 2024 will be determined after the design studies are finalized.
Supply Side Activity													

Access Project													
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification (II)**	**Baseline**	***Baseline Source and Year***	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024-Sept 2025**	**Oct 2025-Sept 2026**	End of Compact Target	Target Source and comments	Notes
Outcome	Electrified localities	Number	Cumulative	0	Source: NA Year: 2018	0	50	250	325	325	325	Project based on the number of expected localities and the planning of activities.	Will be confirmed after the design studies are finalized
	(Tambacounda)	Number	Level	0	Source: NA Year: 2018	0	TBD	TBD	TBD	29	29	Based on the number of expected localities and the planning of activities.	
	(Foundiougne)	Number	Level	0	Source: NA Year: 2018	0	TBD	TBD	TBD	186	186	Based on the number of expected localities and the planning of activities.	
	(Nioro; Bounkiling et Medina Yoro Foula)	Number	Level	0	Source: NA Year: 2018	0	TBD	TBD	TBD	66	66	Based on the number of expected localities and the planning of activities.	
	(Velingara)	Number	Level	0	Source: NA Year: 2018	0	TBD	TBD	TBD	44	44	Based on the number of expected localities and the planning of activities.	
Outcome	Electricity access in project areas	Percentage	Cumulative	0	Source: NA Year: 2018	0	TBD	TBD	TBD	TBD	TBD	TBD	The Cos-Benefit model expected the start of activities in 2020 and the first outcomes in 2024. Targets will be determined after the design

Access Project													
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification (II)**	**Baseline**	***Baseline Source and Year***	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024-Sept 2025**	**Oct 2025-Sept 2026**	End of Compact Target	Target Source and comments	Notes
													studies are finalized.
	(Tambacounda)	Percentage	Level	0	Source: NA Year: 2018	0	TBD	TBD	TBD	TBD	TBD	TBD	
	(Foundiougne)	Percentage	Level	0	Source: NA Year: 2018	0	TBD	TBD	TBD	TBD	TBD	TBD	
	(Nioro; Bounkiling et Medina Yoro Foula)	Percentage	Level	0	Source: NA Year: 2018	0	TBD	TBD	TBD	TBD	TBD	TBD	
	(Velingara)	Percentage	Level	0	Source: NA Year: 2018	0	TBD	TBD	TBD	TBD	TBD	TBD	
Outcome	Percentage of households connected to the national grid	Percentage	Cumulative	0	Source: NA Year: 2018	0	TBD	TBD	TBD	TBD	TBD	TBD	
Outcome	Customers added by project	Number	Cumulative	0	Source: NA Year: 2018	0	0	4483	4618	4755	4755	MCC's CBA model based on WSP feasibility study. Further explanation on how these numbers were generated are included in the 'Targets from Access CBA' tab.	Will work with the MCC economist to desagregate targets by household and business customers.
	(Customer type)												
	(Household)	Number	Cumulative	0	Source: NA Year: 2018	0	0	TBD	TBD	TBD	TBD	TBD	
	(Buisnesses)	Number	Cumulative	0	Source: NA Year: 2018	0	0	TBD	TBD	TBD	TBD	TBD	
	(Social infrastructure)	Number	Cumulative	0	Source: NA Year: 2018	0	0	TBD	TBD	TBD	TBD	TBD	
	(Sub-activity)												
	(Tambacounda)	Percentage	Level	0	Source: NA Year: 2018	0	0	TBD	TBD	TBD	TBD	TBD	
	(Foundiougne)	Percentage	Level	0	Source: NA Year: 2018	0	0	TBD	TBD	TBD	TBD	TBD	
	(Nioro; Bounkiling et Medina Yoro Foula)	Percentage	Level	0	Source: NA Year: 2018	0	0	TBD	TBD	TBD	TBD	TBD	
	(Velingara)	Percentage	Level	0	Source: NA Year: 2018	0	0	TBD	TBD	TBD	TBD	TBD	

Access Project													
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification (II)**	**Baseline**	***Baseline Source and Year***	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024-Sept 2025**	**Oct 2025-Sept 2026**	End of Compact Target	Target Source and comments	Notes
Output	Kilometers of distribution lines upgraded or built	Kilometers	Cumulative	NA	Source: NA Year: 2018	N/A	TBD	TBD	1080	1080	1080	ERR for Access Project Activity 1	423km LV and 657km MV
	(Sub-activity)												
	(Tambacounda)	Kilometers	Cumulative	0	Source: NA Year: 2018	0	TBD	TBD	216	216	216	ERR for Access Project Activity 1	
	(Foundiougne)	Kilometers	Cumulative	0	Source: NA Year: 2018	0	TBD	TBD	481	481	481	ERR for Access Project Activity 1	
	(Nioro; Bounkiling et Medina Yoro Foula)	Kilometers	Cumulative	0	Source: NA Year: 2018	0	TBD	TBD	280	280	280	ERR for Access Project Activity 1	
	(Velingara)	Kilometers	Cumulative	0	Source: NA Year: 2018	0	TBD	TBD	103	103	103	ERR for Access Project Activity 1	
	(Voltage)	Kilometers	Cumulative										
	(Three-phase MV)	Kilometers	Cumulative	0	Source: NA Year: 2018	0	TBD	TBD	260	260	260	ERR for Access Project Activity 1	
	(Single-phase MV)	Kilometers	Cumulative	0	Source: NA Year: 2018	0	TBD	TBD	397	397	397	ERR for Access Project Activity 1	
	(LV)	Kilometers	Cumulative	0	Source: NA Year: 2018	0	TBD	TBD	423	423	423	ERR for Access Project Activity 1	
Output	Transformers installed	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	432	432	432	Activity 3500 WSP	The target values for 2023 and 2024 will be determined after the design studies are finalized.
	(50 KVA)	Number	Cumulative	0	Source: NA Year: 2018	N/A	N/A	TBD	TBD	TBD	TBD	Activity 3500 WSP	
	(100 KVA)	Number	Cumulative	0	Source: NA Year: 2018	N/A	N/A	TBD	TBD	TBD	TBD	Activity 3500 WSP	
Education Campaign for Electricity Literacy Sub-Activity (Consumer Demand Support Activity)													
Outcome	Level of consumer knowledge of energy efficiency standards and equipment*	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Sex)												
	(Male)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	

Access Project													
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification (II)**	**Baseline**	***Baseline Source and Year***	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024-Sept 2025**	**Oct 2025-Sept 2026**	End of Compact Target	Target Source and comments	Notes
	(Female)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Customer type)												
	(Household)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Businesses)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
Outcome	Adoption rate of attitudes and practices related to energy efficiency equipment and standards*	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Sex)												
	(Male)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Female)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Customer type)												
	(Household)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Businesses)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
Outcome	Percentage of households using energy-efficient appliances*	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study.	
	(Male)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Female)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
Outcome	Level of knowledge of the key elements of	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study	

Access Project													
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification (II)**	**Baseline**	***Baseline Source and Year***	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024-Sept 2025**	**Oct 2025-Sept 2026**	End of Compact Target	Target Source and comments	Notes
	the service regulations and the standards and obligations in force at the level of Senelec and dealers by consumers*												
	(Sex)												
	(Male)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Female)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Customer type)												
	(Household)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Businesses)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
Outcome	Level of household understanding of the connection process*	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study	
	(Sex)												
	(Male)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Female)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Customer type)												
	(Household)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Businesses)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
Outcome	Level of knowledge of	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	

Access Project													
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification (II)**	**Baseline**	***Baseline Source and Year***	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024-Sept 2025**	**Oct 2025-Sept 2026**	End of Compact Target	Target Source and comments	Notes
	network connection time*												
	(Sex)												
	(Male)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Female)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Customer type)												
	(Household)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Businesses)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
Outcome	Level of perception of households and businesses on the role of electricity as an input to income-generating activities in the areas of intervention of the MCC (Commune or Locality) *	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study	
	(Sex)												
	(Male)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Female)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Customer type)												
	(Household)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Businesses)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	

Access Project													
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification (II)**	**Baseline**	***Baseline Source and Year***	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024-Sept 2025**	**Oct 2025-Sept 2026**	End of Compact Target	Target Source and comments	Notes
Output	Number of energy efficiency messages	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	Consultant Design study Education campaign	
	(Television)	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	Consultant Design study Education campaign	
	(Radio)	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	Consultant Design study Education campaign	
	(Billboards)	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	Consultant Design study Education campaign	
	(Print media)	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	Consultant Design study Education campaign	
Output	Number of messages on energy consumption and its billing	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	Consultant Design study Education campaign	
	(Television)	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	Consultant Design study Education campaign	
	(Radio)	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	Consultant Design study Education campaign	
	(Billboards)	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	Consultant Design study Education campaign	
	(Print media)	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	Consultant Design study Education campaign	
Output	Number of messages on the connection process to the Senelec RI network	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	Consultant Design study Education campaign	
	(Television)	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	Consultant Design study Education campaign	
	(Radio)	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	Consultant Design study Education campaign	

Access Project													
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification (II)**	**Baseline**	***Baseline Source and Year***	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024-Sept 2025**	**Oct 2025-Sept 2026**	End of Compact Target	Target Source and comments	Notes
	(Billboards)	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	Consultant Design study Education campaign	
	(Print media)	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	Consultant Design study Education campaign	
Output	Number of messages on the productive uses of electricity in MCC intervention areas.	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	Consultant Design study Education campaign	
	(Television)	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	Consultant Design study Education campaign	
	(Radio)	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	Consultant Design study Education campaign	
	(Billboards)	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	Consultant Design study Education campaign	
	(Print media)	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	Consultant Design study Education campaign	
Output	Number of entities benefiting from accompaniment activities and support for productive uses	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	Consultant Design study Education campaign	
	(Individual)	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	Consultant Design study Education campaign	
	(EIG)	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	Consultant Design study Education campaign	
	(GPF)	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	Consultant Design study Education campaign	
Supporting connections Sub-activity (Consumer Demand Support Activity)													
Outcome	Level of perception of households in relation to the availability of	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	

Access Project													
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification (II)**	**Baseline**	***Baseline Source and Year***	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024-Sept 2025**	**Oct 2025-Sept 2026**	End of Compact Target	Target Source and comments	Notes
	equipment for connections in the areas of intervention of the MCC (municipality or locality) *												
	(Male)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Female)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
Outcome	Number of stock-outs	Number	Level	TBD	Source: Baseline study Year: 2021	TBD	TBD	TBD	TBD	12700	12700	Senelec Action Plan	
Outcome	Time to first visit	Days	Level	TBD	Source: Senelec Action Plan year: 2021	TBD	TBD	TBD	5	5	5	Senelec Action Plan	
Outcome	Time to connect	Days	Level	39	Source: Senelec Action Plan year: 2021	39	25	25	10	10	10	Senelec Action Plan	
Outcome	Degree of customer satisfaction with the relationships and communication developed by electricity suppliers*	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study	
	(Sex)												
	(Male)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Female)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Customer type)												
	(Household)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Businesses)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	

Access Project													
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification (II)**	**Baseline**	***Baseline Source and Year***	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024-Sept 2025**	**Oct 2025-Sept 2026**	End of Compact Target	Target Source and comments	Notes
Outcome	Proportion of qualified and competent electricians for inside wiring in MCC's intervention areas*	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	50	70	100	100	100	Project calculation to be confirmed by the consultant	**The target is to train all electricians available to do interior wiring.**
	(Male)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Female)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
Outcome	Qualified electricians*	Number	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	202	452	702	702	702	Project calculation: 2 electricians per village +2 per municipality	
	(Male)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Female)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
Outcome	Level of client satisfaction with providers*	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study	
	(Sex)												
	(Male)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Female)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Customer type)												
	(Household)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Businesses)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
Output	Number of stakeholders	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	Consultant Design study Education campaign	

Access Project													
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification (II)**	**Baseline**	***Baseline Source and Year***	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024-Sept 2025**	**Oct 2025-Sept 2026**	End of Compact Target	Target Source and comments	Notes
	strengthened in communication												
	(Senelec)	Number	Cumulative	0	Source: NA Year: 2018	N/A	N/A	TBD	TBD	TBD	TBD	Consultant Design study Education campaign	
	(ERA)	Number	Cumulative	0	Source: NA Year: 2018	N/A	N/A	TBD	TBD	TBD	TBD	Consultant Design study Education campaign	
Output	Customer service evaluation date	Date	Date	0	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	Design study	
Output	Number of technical assistances provided to Senelec regional offices and concessionaires	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	After validation of Senelec Action Plan	
	(Training)	Number	Cumulative	0	Source: NA Year: 2018	0	TBD	TBD	TBD	TBD	TBD	After validation of Senelec Action Plan	
	(Advisory support)	Number	Cumulative	0	Source: NA Year: 2018	0	TBD	TBD	TBD	TBD	TBD	After validation of Senelec Action Plan	
	(Other)	Number	Cumulative	0	Source: NA Year: 2018	0	TBD	TBD	TBD	TBD	TBD	After validation of Senelec Action Plan	
Output	Date of establishment of the inventory management system	Date	Date	NA	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	TBD	
Output	Date of completion of the inventory of electricians qualified to do inside wiring	Date	Date	NA	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	TBD	
Output	Date of realization of the state of the service providers able to make the study to connect households beyond 35 meters of the network	Date	Date	NA	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	TBD	

Access Project													
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification (II)**	**Baseline**	***Baseline Source and Year***	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024-Sept 2025**	**Oct 2025-Sept 2026**	End of Compact Target	Target Source and comments	Notes
Output	Number of electricians trained	Number	**Cumulative**	0	Source: NA Year: 2018	N/A	TBD	TBD	TBD	702	702	Equipment Access Facilitation study	
	(Male)	Percentage	Level (average)	0	Source: NA Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Equipment Access Facilitation study	
	(Female)	Percentage	Level (average)	0	Source: NA Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Equipment Access Facilitation study	
Market Facilitation for Equipment Access Sub-Activity (Consumer Demand Support Activity)													
Outcome	Number of equipment suppliers operating in project areas	Number	Level	TBD	Source: Equipment Access Facilitation study or Baseline Study Year: 2021	TBD	TBD	TBD	TBD	TBD	TBD	Equipment Access Facilitation study or Baseline Study	
Outcome	Number of credits granted for access to equipment	Number	Level	TBD	Source: Equipment Access Facilitation study or Baseline Study Year: 2021	TBD	TBD	TBD	TBD	TBD	TBD	Equipment Access Facilitation study or Baseline Study	
Outcome	Satisfaction rate with acquired equipment*	Percentage	Level (average)	TBD	Source: Baseline study Year: 2021	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	The monitoring surveys only cover the customers and beneficiaries of the Access Project
	(Sex)												
	(Male)	Percentage	Level (average)	0	Source: NA Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Female)	Percentage	Level (average)	0	Source: NA Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Customer type)												

Access Project													
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification (II)**	**Baseline**	***Baseline Source and Year***	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024-Sept 2025**	**Oct 2025-Sept 2026**	End of Compact Target	Target Source and comments	Notes
	(Household)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Businesses)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
Outcome	Satisfaction rate with financial products*	Percentage	Level (average)	TBD	Source: Baseline study Year: 2021	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study	
	(Sex)												
	(Male)	Percentage	Level (average)	0	Source: NA Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Female)	Percentage	Level (average)	0	Source: NA Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Customer type)												
	(Household)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Businesses)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
Outcome	Electrical equipment uses	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study	
	(Sex)												
	(Male)	Percentage	Level (average)	0	Source: NA Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Female)	Percentage	Level (average)	0	Source: NA Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Customer type)												
	(Household)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	
	(Businesses)	Percentage	Level (average)	TBD	Source: Baseline study Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after the baseline study:	

Access Project													
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification (II)**	**Baseline**	***Baseline Source and Year***	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024-Sept 2025**	**Oct 2025-Sept 2026**	End of Compact Target	Target Source and comments	Notes
Output	Number of technical assistances provided to financial institutions	Number	Cumulative	0	Source: NA Year: 2018	0	TBD	TBD	TBD	TBD	TBD	Equipment Access Facilitation Study	
	(Tambacounda)	Number	Cumulative	0	Source: NA Year: 2018	0	TBD	TBD	TBD	TBD	TBD	Equipment Access Facilitation Study	
	(Foundiougne)	Number	Cumulative	0	Source: NA Year: 2018	0	TBD	TBD	TBD	TBD	TBD	Equipment Access Facilitation Study	
	(Nioro; Bounkiling et Medina Yoro Foula)	Number	Cumulative	0	Source: NA Year: 2018	0	TBD	TBD	TBD	TBD	TBD	Equipment Access Facilitation Study	
	(Velingara)	Number	Cumulative	0	Source: NA Year: 2018	0	TBD	TBD	TBD	TBD	TBD	Equipment Access Facilitation Study	
Output	Number of technical assistances provided to equipment suppliers	Number	Cumulative	0	Source: NA Year: 2018	N/A	TBD	TBD	TBD	TBD	TBD	Equipment Access Facilitation Study	
	(Tambacounda)	Number	Cumulative	0	Source: NA Year: 2018	0	TBD	TBD	TBD	TBD	TBD	Equipment Access Facilitation Study	
	(Foundiougne)	Number	Cumulative	0	Source: NA Year: 2018	0	TBD	TBD	TBD	TBD	TBD	Equipment Access Facilitation Study	
	(Nioro; Bounkiling et Medina Yoro Foula)	Number	Cumulative	0	Source: NA Year: 2018	0	TBD	TBD	TBD	TBD	TBD	Equipment Access Facilitation Study	
	(Velingara)	Number	Cumulative	0	Source: NA Year: 2018	0	TBD	TBD	TBD	TBD	TBD	Equipment Access Facilitation Study	

Reform Project

Reform Project													
Indicator Level (II)	Indicator Name (II)	Unit of Measure (II)	Indicator Classification	Baseline	Baseline Source and Year	Sept 2021-Sept 2022	Oct 2022-Sept 2023	Oct 2023-Sept 2024	Oct 2024 - Sept 2025	Oct 2025-Sept 2026	End of Compact Target	Target Source	Notes
Project-level													
Outcome	Customer satisfaction index **(OBJECTIVE-LEVEL)**	Percentage	Level (average)	TBD	Source: Survey data Year :2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study	
	(Sex)												
	(Male)	Percentage	Level (average)	TBD	Source: Survey data Year :2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study	
	(Female)	Percentage	Level (average)	TBD	Source: Survey data Year :2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study	
	(Voltage level)												
	(LV domestic)	Percentage	Level	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study	
	(LV business)	Percentage	Level	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study	
	(MV)	Percentage	Level	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study	
	(HV)	Percentage	Level	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study	
	(Plant ownership)												
	(Senelec)	Percentage	Level	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study	
	(CER)	Percentage	Level	TBD	Source: Baseline Study Report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study	

Reform Project													
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification**	**Baseline**	**Baseline Source and Year**	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024 - Sept 2025**	**Oct 2025-Sept 2026**	**End of Compact Target**	**Target Source**	**Notes**
Outcome	Rate of access to electricity **(OBJECTIVE-LEVEL)**	Percentage	Level (cumulative)	76%	CEP/MPE Year :2019	NA	NA	NA	NA	NA	NA	Universal access is targeted by 2025	
	(Urban)	Percentage	Level (cumulative)	94%	CEP/MPE Year :2019	NA	NA	NA	NA	NA	NA	Universal access is targeted by 2025	
	(Rural)	Percentage	Level (cumulative)	53.9%	CEP/MPE Year :2019	NA	NA	NA	NA	NA	NA	Universal access is targeted by 2025	
Outcome	Operating cost-recovery ratio **(OBJECTIVE-LEVEL)**	Percentage	Level	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
	(Senelec)	Percentage	Level (Cumulative)	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
	(CER)	Percentage	Level (Cumulative)	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
Outcome	Operating cash flow ratio **(OBJECTIVE-LEVEL)**	Percentage	Level	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
	(Senelec)	Percentage	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
	(CER)	Percentage	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
Outcome	Net return on equity* **(OBJECTIVE-LEVEL)**	Percentage	Level	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	For Senelec (Ref objectif Contrat de Performance) 2021: 3,5% 2022 : 4% 2023 : 4,5%
	(Senelec)	Percentage	Level	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	For Senelec (Ref objectif Contrat de Performance) 2021: 3,5%

Reform Project													
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification**	**Baseline**	**Baseline Source and Year**	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024 - Sept 2025**	**Oct 2025-Sept 2026**	**End of Compact Target**	**Target Source**	**Notes**
													2022 : 4% 2023 : 4,5%
	(CER)	Percentage	Level	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
Outcome	Total non-distributed energy on the network **(OBJECTIVE-LEVEL)** (Low voltage)	Megawatt hours	Level (cumulative)	16,875	Source : Rapport Mouvement d'Energies Page 25 (Tableau 12) Year: 2019	14,000	13,000	12,000	11,000	TBD	TBD	2021-2023 source: Senelec performance contract 2024-2025 values assume continuation of trend per DQR report recommendation	
	(LV)	Megawatt hours	Level (cumulative)	TBD	Source : Rapport Mouvement d'Energies (Tableau 12) Year: 2019	NA	NA	NA	NA	NA	NA	NA	
	(MV)	Megawatt hours	Level (cumulative)	TBD	Source : Rapport Mouvement d'Energies (Tableau 12) Year: 2019	NA	NA	NA	NA	NA	NA	NA	
	(HV)	Megawatt hours	Level (cumulative)	TBD	Source : Rapport Mouvement d'Energies (Tableau 12) Year: 2019	NA	NA	NA	NA	NA	NA	NA	
Outcome	Distribution system losses	Percentage	Level	16,25%	Source: Loss study by MacroConsulting Deliverable 7 Page 22 Year: 2018	TBD	TBD	TBD	TBD	TBD	TBD	TBD	

Reform Project													
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification**	**Baseline**	**Baseline Source and Year**	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024 - Sept 2025**	**Oct 2025-Sept 2026**	**End of Compact Target**	**Target Source**	**Notes**
Sector Governance Activity													
Outcome	Integrated investment planning practices* **(OBJECTIVE-LEVEL)**	Index	Level	1.72	SOFRECO Year: 2019	6.42	TBD	TBD	TBD	6.92	6.92	Reform Project Team	The baseline is SOFRECO's estimate
Outcome	Average Cost per kWh	CFA Francs	Level	61.61	Rapport du Mouvement d'Energies (Senelec) Page 15 Year : 2019	54.06	52.72	51.42	50.15	48.85	48.85	DQR report, deliverable 2c, P89	
Outcome	GoS debt obligations to Senelec	CFA Francs	Level (Cumulative)	0	NA	38,000,000,000	10,000,000,000	9,900,000,000	9,000,000,000	00	00	Letter from Ministry of Finance and Economy's letter of 24 August 2020 in response to the MCC CP	
Process	Sector reimbursement plan adoption	Date	Date	NA	NA	NA	NA	NA	NA	NA	NA		Result already achieved so no target established
Legal and Sector Framework Sub-Activity (Sector Governance Activity)													
Outcome	Least-cost generation*	Percentage	Level	5%	Rapport Mouvement d'énergie Pages 11 et 14 Year: 2019	TBD	TBD	TBD	TBD	TBD	TBD	Senelec point focal Rapport de Macroconsulting	
Outcome	Third-party network access contracts*	Number	Level (Cumulative)	0	NA	TBD	TBD	TBD	TBD	TBD	TBD	BART study	According to the performance contract (2021-2023), the technical modalities ensuring third-party access

Reform Project													
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification**	**Baseline**	**Baseline Source and Year**	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024 - Sept 2025**	**Oct 2025-Sept 2026**	**End of Compact Target**	**Target Source**	**Notes**
													should be done by December 31, 2022.
Outcome	kWh price in power purchase agreements **KEY TARGETED RESULT**	CFA Francs	Level	59.42	Rapport mouvement d'énergie 2016-2018	TBD	TBD	TBD	TBD	TBD	TBD	CRSE public consultation report	
Outcome	Power price in third-party access purchase agreements*	Percentage	Level	NA	NA	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
Outcome	Cost transparency index*	Percentage	Level (Average)	TBD	Survey data Year 2022	TBD	TBD	TBD	TBD	TBD	TBD	Survey data	
Outcome	Planned funds to sector*	CFA Francs	Level	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
Outcome	Sector investment*	CFA Francs	Level	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
Outcome	Compensation recovery rate*	Percent	Level	TBD	TBD	TBD	TBD	TBD	100 %	100%	100%	Reimbursement plan	
Outcome	Required revenue*	CFA Francs	Level	464 899,000,000	Decision N ° 2020-31 Relating to the maximum authorized income of Senelec» Year: 1st July 2020 2020	NA	NA	NA	NA	NA	NA	NA	
Outcome	Overall performance*	Percent	Level	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
	(Senelec)	Percentage	Level	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
	(CER)	Percentage	Level	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	

Reform Project													
Indicator Level (II)	Indicator Name (II)	Unit of Measure (II)	Indicator Classification	Baseline	Baseline Source and Year	Sept 2021-Sept 2022	Oct 2022-Sept 2023	Oct 2023-Sept 2024	Oct 2024 - Sept 2025	Oct 2025-Sept 2026	End of Compact Target	Target Source	Notes
Output	Date of promulgation of the Electricity Code	Date	Date	NA	NA	NA	NA	NA	NA	NA	09-Septenber-2021	Performance contract (2021-2023) targets June 30, 2021. The Road map action plan targeted October 2019.	Actual target is pre-EIF 10/30/2019
Output	Date of adoption of application texts	Date	Date	NA	NA	TBD	NA	NA	NA	NA	TBD	TBD	
Output	Date of preparation of the financial statements by the various subsidiaries	Date	Date	NA	NA	NA	NA	NA	NA	NA	09-September-2021	End of Compact target source: Roadmap action plan 2019-2024	Actual target is pre-EIF May 2020
Output	Date of completion of the unbundling	Date	Date	NA	NA	NA	NA	20-May-2024	NA	NA	20-May-2024	Annex III of the Compact. MCC Work Plan during Compact Signature.	The performance contract has a more ambitious target of completing 'filialisation' by 31 December 2023.
Output	TSO operational	Date	Date	NA	NA	NA	NA	30-January-2024	NA	NA	30-January-2024	Electricity code	According to the Performance Contract de performance (2021-2023), a holding company and three subsidiaries should be functional by June 30, 2023.

Reform Project													
Indicator Level (II)	Indicator Name (II)	Unit of Measure (II)	Indicator Classification	Baseline	Baseline Source and Year	Sept 2021-Sept 2022	Oct 2022-Sept 2023	Oct 2023-Sept 2024	Oct 2024 - Sept 2025	Oct 2025-Sept 2026	End of Compact Target	Target Source	Notes
Ministry Capacity and Sector Planning Sub-Activity (Sector Governance Activity)													
Outcome	Numbers of business plan developed	Number	Cumulative	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
Outcome	Number of private firms in rural electrification*	Number	Cumulative	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
Output	MPE capacity building plan for integrated planning developed	Date	Date	NA	NA	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
Output	Number of people trained in integrated planning	Number	Cumulative	0	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
	(Male)	Number	Cumulative	0	NA	NA	NA	NA	NA	NA	NA		
	(Female)	Number	Cumulative	0	NA	NA	NA	NA	NA	NA	NA		
Output	Affermage transition plan	Date	Date	NA	NA	NA	03-April-2023	NA	NA	NA	03-April-2023	Annex III of the Compact. MCC Work Plan during Compact Signature.	
Output	Adoption of an integrated investment plan framework	Date	Date	NA	NA	NA	NA	NA	NA	NA	NA	Annex III of the Compact. MCC Work Plan during Compact Signature.	Actual target is pre-EIF 9-April- 2021
Output	LPDSE 2024-2029	Date	Date	NA	NA	NA	31-December-2023	NA	NA	NA	31-December-2023	Road map action plan. "FINAL Plan Actions 2019-2024" Action "P1A7"	
Output	Number of people trained	Number	Cumulative	0	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	

Reform Project													
Indicator Level (II)	Indicator Name (II)	Unit of Measure (II)	Indicator Classification	Baseline	Baseline Source and Year	Sept 2021-Sept 2022	Oct 2022-Sept 2023	Oct 2023-Sept 2024	Oct 2024 - Sept 2025	Oct 2025-Sept 2026	End of Compact Target	Target Source	Notes
	in preparation of business plans												
	(Male)	Number	Cumulative	0	NA	NA	NA	NA	NA	NA	NA		
	(Female)	Number	Cumulative	0	NA	NA	NA	NA	NA	NA	NA		
Private Sector Participation Sub-Activity (Sector Governance Activity)													
Outcome	Application processing time*	Days	Level	NA	NA	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
Outcome	Number of approved projects*	Number	Cumulative	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Outcome	Private sector participation in electricity generation **KEY TARGETED RESULT**	Percentage	Level	54.00	Rapport du Mouvement d'Energies (Senelec) Page 11 Year 2019	TBD	TBD	TBD	TBD	TBD	TBD	TBD/MPE	
Outcome	Number of sovereign guarantees	CFA Francs	Level (cumulative)	TBD	TBD	NA	NA	NA	NA	NA	NA		
Outcome	Average volume of sovereign guarantees	CFA Francs	Level (cumulative)	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
Outcome	Cash flow for public rural investments*	CFA Francs	Level	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
	(Senelec rural)	CFA Francs	Level	TBD	TBD	NA	NA	NA	NA	NA	NA		
	(CER)	CFA Francs	Level	TBD	TBD	NA	NA	NA	NA	NA	NA		
Output	One-stop-shop established	Date	Date	NA	NA	NA	30-June-2023	NA	NA	NA	30-June-2023	Road map action plan. "FINAL Plan Actions 2019-2024"	
Output	Date of preparation of the investor's	Date	Date	NA	NA	TBD	TBD	TBD	TBD	TBD	TBD	TBD	

Reform Project													
Indicator Level (II)	Indicator Name (II)	Unit of Measure (II)	Indicator Classification	Baseline	Baseline Source and Year	Sept 2021-Sept 2022	Oct 2022-Sept 2023	Oct 2023-Sept 2024	Oct 2024 - Sept 2025	Oct 2025-Sept 2026	End of Compact Target	Target Source	Notes
	guide to the electricity sector												
Output	IPP solicitation framework	Date	Date	NA	NA	NA	NA	NA	NA	NA	NA	Annex III of the Compact. MCC Work Plan during Compact Signature.	Actual target is pre-EIF (03-April-2021)
Output	Ancillary services plan	Date	Date	NA	NA	25-October-2021	NA	NA	NA	NA	25-October-2021	Annex III of the Compact. MCC Work Plan during Compact Signature.	
Output	Market opening transition tlan	Date	Date	NA	NA	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
Regulatory Governance Sub-Activity (Sector Regulatory Strengthening Activity)													
Outcome	Regulatory governance index **KEY TARGETED RESULT**	Index	Level	TBD	Baseline study report Year:2022	TBD	TBD	TBD	TBD	TBD	TBD	After Baseline study	
Outcome	Regulator law and electricity code adopted	Date	Date	N/A	NA	NA	NA	NA	NA	NA	NA	NA	Actual target is pre-EIF: 30-October-2019. The Road map action plan targeted October 2019.
Outcome	Regulatory power index*	Index	Level	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD after Baseline study	
Outcome	Electricity regulatory index (Independence)*	Number	Level	0.756	Annex 2 (or P82) of the AfDB Electricity Regulatory Index 2020	0.836	0.876	0.916	0.956	0.996	0.996	M&E suggestion based on AfDB ERI report. The targets represent an	

Reform Project													
Indicator Level (II)	Indicator Name (II)	Unit of Measure (II)	Indicator Classification	Baseline	Baseline Source and Year	Sept 2021-Sept 2022	Oct 2022-Sept 2023	Oct 2023-Sept 2024	Oct 2024 - Sept 2025	Oct 2025-Sept 2026	End of Compact Target	Target Source	Notes
												incremental increase starting in 2021 to achieve almost a perfect score by the end of the Compact. In 2020, the best score for the regulatory governance index I was Uganda with .925.	
Outcome	Transparency and predictability of decisions*	Number	Level	1	AfDB ERI 2020 Report	1	1	1	1	1	1	M&E suggestion.	
Outcome	Customer and sector actors' understanding of regulation's purpose and objectives*	Percentage	Level (Average)	TBD	Source: Survey Data Year 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
	(Male)	Percentage	Level (Average)	TBD	Source: Survey Data Year 2022	NA	NA	NA	NA	NA	NA		
	(Female)	Percentage	Level (Average)	TBD	Source: Survey Data Year 2022	NA	NA	NA	NA	NA	NA		
Outcome	Customer and sectors actors' understanding of regulation decisions*	Percentage	Level (Average)	TBD	Source: Survey Data Year 2022	NA	NA	NA	NA	NA	NA		
	(Male)	Percentage	Level (Average)	TBD	Source: Survey Data Year 2022	NA	NA	NA	NA	NA	NA		
	(Female)	Percentage	Level (Average)	TBD	Source: Survey Data Year 2022	NA	NA	NA	NA	NA	NA		

Reform Project													
Indicator Level (II)	Indicator Name (II)	Unit of Measure (II)	Indicator Classification	Baseline	Baseline Source and Year	Sept 2021-Sept 2022	Oct 2022-Sept 2023	Oct 2023-Sept 2024	Oct 2024 - Sept 2025	Oct 2025-Sept 2026	End of Compact Target	Target Source	Notes
Output	New organizational framework for CRSE	Date	Date	NA	NA	26-Nov-21	NA	NA	NA	NA	26-Nov-21	Annex III of the Compact	
Output	CRSE staff development plan completed	Date	Date	NA	NA	NA	NA	NA	NA	NA	9-Sept-2021	Annex III of the Compact	The actual pre-EIF target is 27-May-2021
Output	Date of promulgation of the law on the regulator	Date	Date	NA	NA	NA	NA	NA	NA	NA	NA	Roadmap action plan	Pre-EIF target: 30-OCT-2019
Output	CRSE communications Plan	Date	Date	NA	NA	NA	03-Apr-23	NA	NA	NA	03-Apr-23	Annex III of the Compact	
Output	New CRSE staff hired	Number	Level	0	Source: TBD Year 2021	TBD	TBD	TBD	TBD	TBD	TBD	Target will be defined after recruitment plan	
	(Male)	Number	Level	0	Source: TBD Year 2021	NA	NA	NA	NA	NA	NA		
	(Female)	Number	Level	0	Source: TBD Year 2021	NA	NA	NA	NA	NA	NA		
Process	Financial autonomy study	Date	Date	NA	NA	NA	NA	NA	NA	NA	NA	Road Map Action Plan. Activity P1-B3	Actuel pre-EIF target is 30-July-2021
Process	Salary study	Date	Date	NA	NA	30-December-2021	NA	NA	NA	NA	30-December-2021	Road Map Action Plan. Action P1.B7 the exact date is not specified in the road map action plan, but this is included in a broader activity going from 2020 to 2023. We assume this would need to be done	

Reform Project													
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification**	**Baseline**	**Baseline Source and Year**	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024 - Sept 2025**	**Oct 2025-Sept 2026**	**End of Compact Target**	**Target Source**	**Notes**
												earlier on in that period.	
Regulatory Substance Sub-Activity (Sector Regulatory Strengthening Activity)													
Outcome	Regulatory substance Index* **KEY TARGETED RESULT**	Number	Level	TBD	Baseline report Year: 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD	After baseline study
Outcome	GoS compensation timeliness **KEY TARGETED RESULT**	Days	Level	TBD	TBD	90	90	90	90	90	90	Performance Contract (2021-2023).	The target is actually less than 90 days since it should be paid within the same quarter it is received. 90 days can be retained for simplicity's sake.
Outcome	GoS debt recovery **KEY TARGETED RESULT**	Percentage	Level	TBD	TBD	TBD	TBD	TBD	TBD	100%	100%	Contract de performance (2021-2023).	
Outcome	Cost-reflective tariff regime **KEY TARGETED RESULT**	Percentage	Level	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
Outcome	Quality data provided by the operators to the CRSE*	Percentage	Level	TBD	Baseline study Year 2022	TBD	TBD	TBD	TBD	TBD	TBD	TBD after baseline study	
Outcome	Sector stakeholder understanding of new sector policies and regulations	Percentage	Level	TBD	Survey data Year :2021	TBD	TBD	TBD	TBD	TBD	TBD	TBD after baseline study	

Reform Project													
Indicator Level (II)	Indicator Name (II)	Unit of Measure (II)	Indicator Classification	Baseline	Baseline Source and Year	Sept 2021- Sept 2022	Oct 2022- Sept 2023	Oct 2023- Sept 2024	Oct 2024 - Sept 2025	Oct 2025- Sept 2026	End of Compact Target	Target Source	Notes
	(Male)	Percentage	Level	TBD	Survey data Year :2021	NA	NA	NA	NA	NA	NA	TBD after baseline study	
	(Female)	Percentage	Level	TBD	Survey data Year :2021	NA	NA	NA	NA	NA	NA	TBD after baseline study	
Outcome	Tariff plan adoption	Date	Date	NA	NA	NA	NA	NA	NA	NA	NA	Annex III of the Compact	Pre-EIF target: 26-May- 2020 Actual date is 06-Aug-2021
Output	Third party access contracts and documents drafted	Date	Date	NA	NA	NA	NA	NA	NA	NA	NA	Annex III of the Compact	Pre-EIF target: 13-May-2021
Output	Date of completion of grid audit	Date	Date	NA	NA	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
Process	Tariff study completion	Date	Date	NA	NA	NA	NA	NA	NA	NA	NA	Road Map Action Plan. Activity P1-B2.	Pre-EIF target: 30-May-2020
Incentivizing Utility Performance Sub-Activity (Sector Utility Strengthening Activity)													
Outcome	Senelec staff skills in financial management*	Percentage	Level (Average)	TBD	Source: Survey study Year 2022	TBD	TBD	TBD	TBD	TBD	Baseline consultant		
	(Male)	Percentage	Level (Average)	TBD	Source: Survey study Year 2022	NA	NA	NA	NA	NA	Baseline consultant		
	(Female)	Percentage	Level (Average)	TBD	Source: Survey study Year 2022	NA	NA	NA	NA	NA	Baseline consultant		
Outcome	Budget execution rate	Percentage	Level	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
Outcome	Date of identification of poor performance drivers	Date	Date	NA	NA	TBD	TBD	TBD	TBD	TBD	TBD	Will be defined after design study	

Reform Project													
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification**	**Baseline**	**Baseline Source and Year**	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024 - Sept 2025**	**Oct 2025-Sept 2026**	**End of Compact Target**	**Target Source**	**Notes**
Outcome	Transmission date of poor performance recommendations to the Senelec Director General	Date	Date	NA	NA	TBD	TBD	TBD	TBD	TBD	TBD	Will be defined after design study	
Output	Senelec audit staff training	Number	Cumulative	0	Source: NA Year: 2019	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
	(Male)	Number	Cumulative	0	Source: NA Year: 2019	NA	NA	NA	NA	NA	NA		
	(Female)	Number	Cumulative	0	Source: NA Year: 2019	NA	NA	NA	NA	NA	NA		
Process	Performance incentive program	Date	Date	NA	NA	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
Network Management Sub-Activity (Sector Utility Strengthening Activity)													
Outcome	Efficient GIS **KEY TARGETED RESULT**	Number	Level	TBD	Consultant Report Year: TBD	TBD	TBD	TBD	TBD	TBD	TBD	GIS Consultant report	
Outcome	Optimal management of GIS database **KEY TARGETED RESULT**	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	GIS Consultant report	
Outcome	Maintenance expenditure-asset value ratio **KEY TARGETED RESULT**	Percentage	Level (cumulative)	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD		
	(MV)	Percentage	Level (cumulative)	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD		
	(LV)	Percentage	Level (cumulative)	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD		

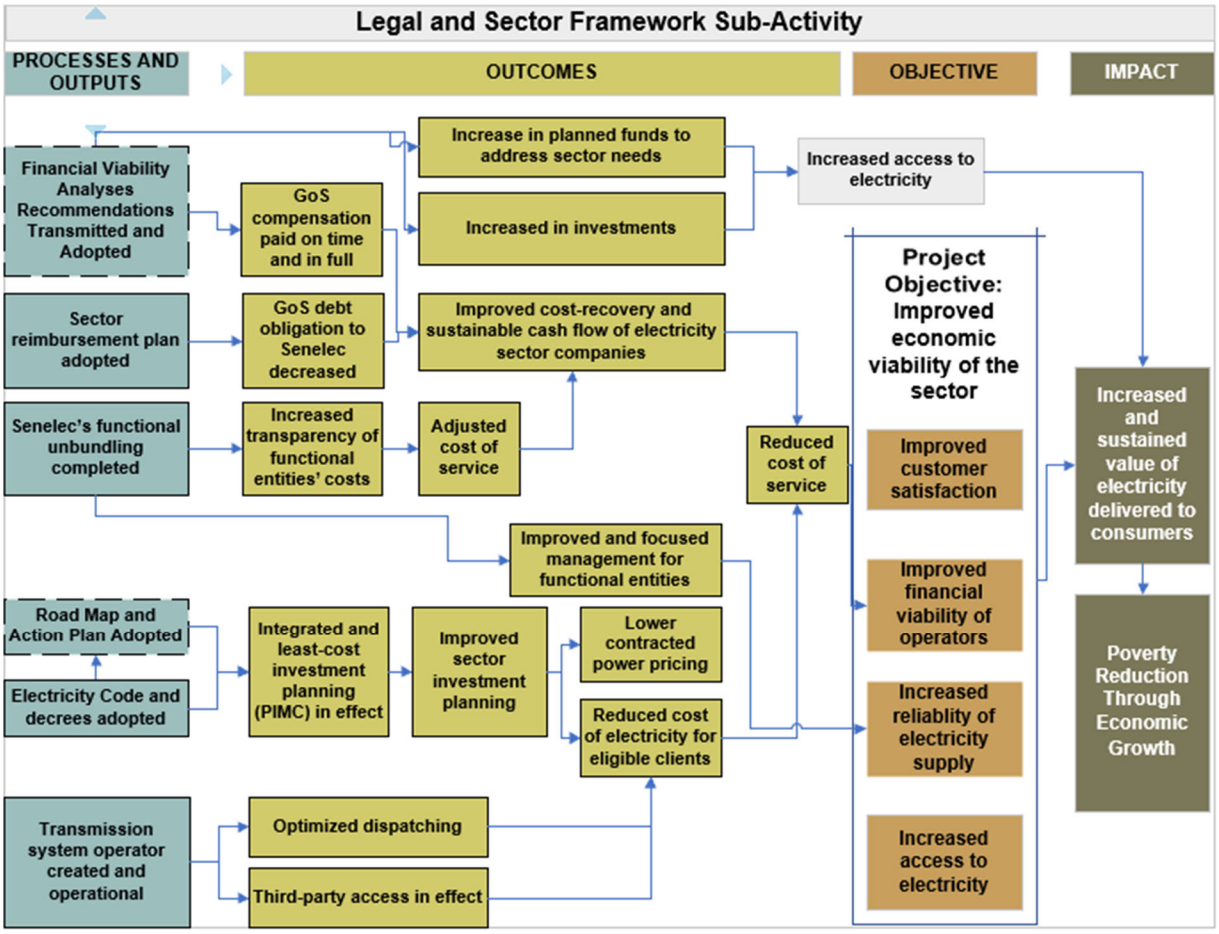
Reform Project													
Indicator Level (II)	**Indicator Name (II)**	**Unit of Measure (II)**	**Indicator Classification**	**Baseline**	**Baseline Source and Year**	**Sept 2021-Sept 2022**	**Oct 2022-Sept 2023**	**Oct 2023-Sept 2024**	**Oct 2024 - Sept 2025**	**Oct 2025-Sept 2026**	**End of Compact Target**	**Target Source**	**Notes**
Outcome	Technical losses due to poorly maintained network	Kilowatt hours	Level	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD		
Outcome	Number of malfunctions on HTA lines per 100 km of HTA lines	Number	Level (Cumulative)	26,88	Source : Performance Contract de performance 2021-2013 Page 36 Year: 2019	25	20	15	TBD	TBD	TBD	Performance Contract de performance 2021-2013	
Outcome	Amount of energy imported or exported	Megawatt hours	Level (Cumulative)	TBD	Senelec Point focal	TBD	TBD	TBD	TBD	TBD	TBD	Senelec Point focal	
	(Imported)	Megawatt hours	Level (Cumulative)	TBD	Senelec Point focal	NA	NA	NA	NA	NA	NA		
	(Exported)	Megawatt hours	Level (Cumulative)	TBD	Senelec Point focal	NA	NA	NA	NA	NA	NA		
Output	Number of Senelec agents trained in managing the assets of MV network/BT **KEY TARGETED RESULT**	Number	Level (Cumulative)	TBD	Source: Rapport Consultant Year: 2021	TBD	TBD	TBD	TBD	TBD	TBD after conception		
	(Male)	Number	Level (Cumulative)	TBD	Source: Rapport Consultant Year: 2021	NA	NA	NA	NA	NA	NA		
	(Female)	Number	Level (Cumulative)	TBD	Source: Rapport Consultant Year: 2021	NA	NA	NA	NA	NA	NA		
Output	GIS completeness	Percentage	Level	0	NA	TBD	TBD	TBD	TBD	100%	100%	Targets to be set based on GIS	

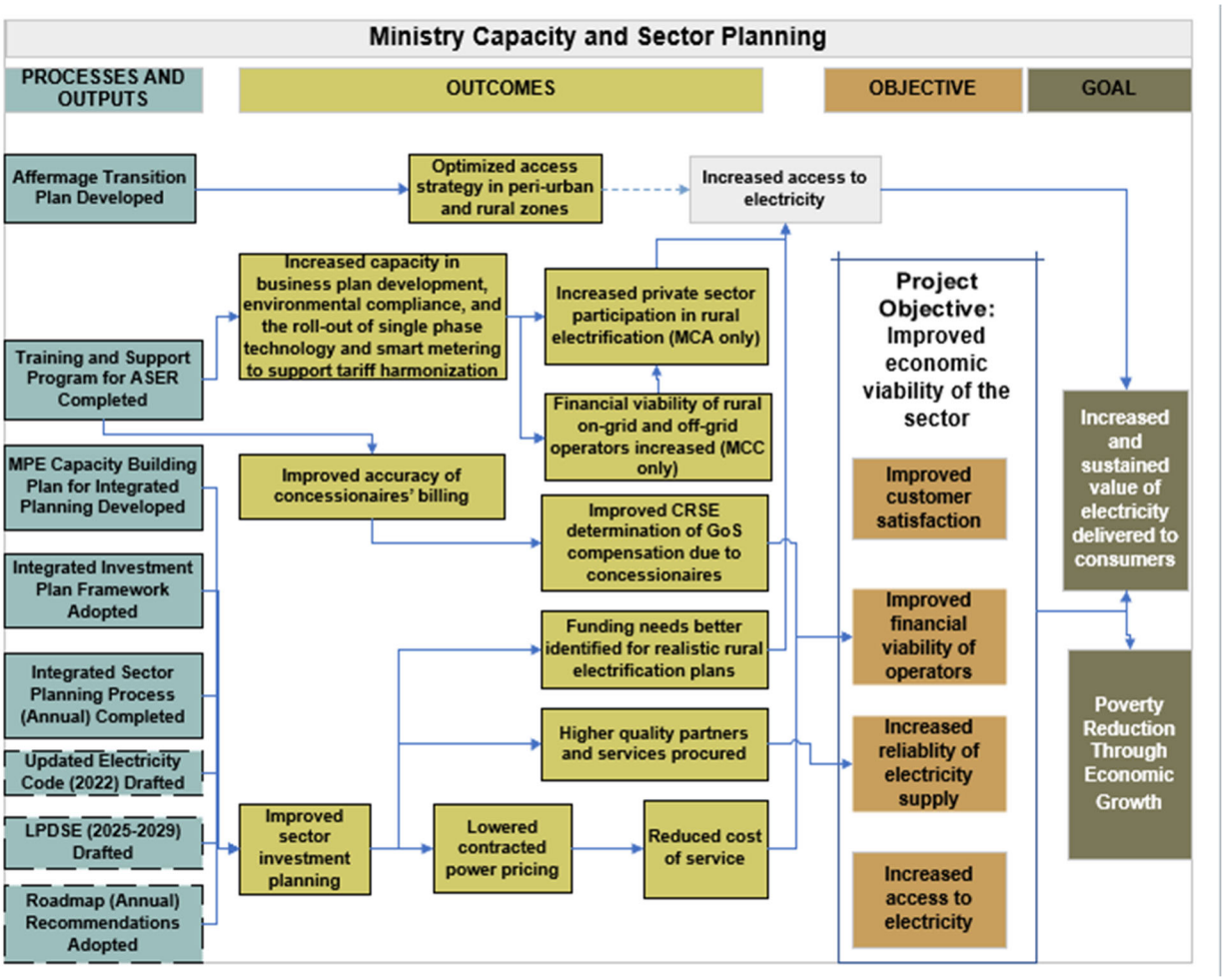
Reform Project													
Indicator Level (II)	Indicator Name (II)	Unit of Measure (II)	Indicator Classification	Baseline	Baseline Source and Year	Sept 2021-Sept 2022	Oct 2022-Sept 2023	Oct 2023-Sept 2024	Oct 2024 - Sept 2025	Oct 2025-Sept 2026	End of Compact Target	Target Source	Notes
												consultant's work plan.	
Output	Geo spatial mapping of the network	Date	Date	NA	NA	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
Output	Functional GIS of MV/LV network	Date	Date	NA	NA	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
Output	Number of employees trained in the Computerized Maintenance Management System (CMMS)	Number	Cumulative	0	NA	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
	(Male)	Number	Cumulative	0	NA	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
	(Female)	Number	Cumulative	0	NA	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
Output	Date of completion of the extension of the CMMS	Date	Date	NA	NA	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
Output	Setup of new dispatching model	Date	Date	NA	NA	TBD	TBD	TBD	TBD	TBD	TBD	TBD	

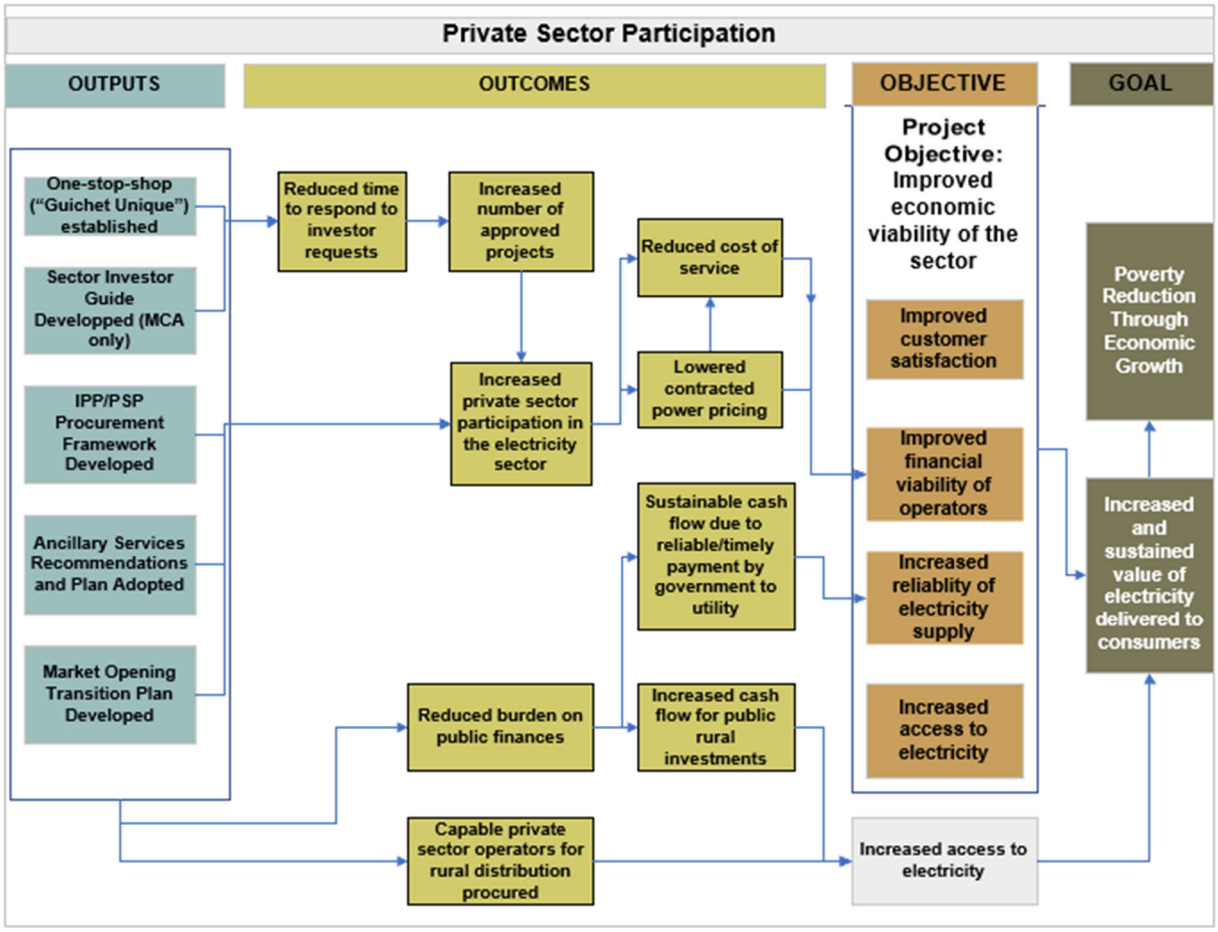
ANNEX III: Modification of the M&E Plan

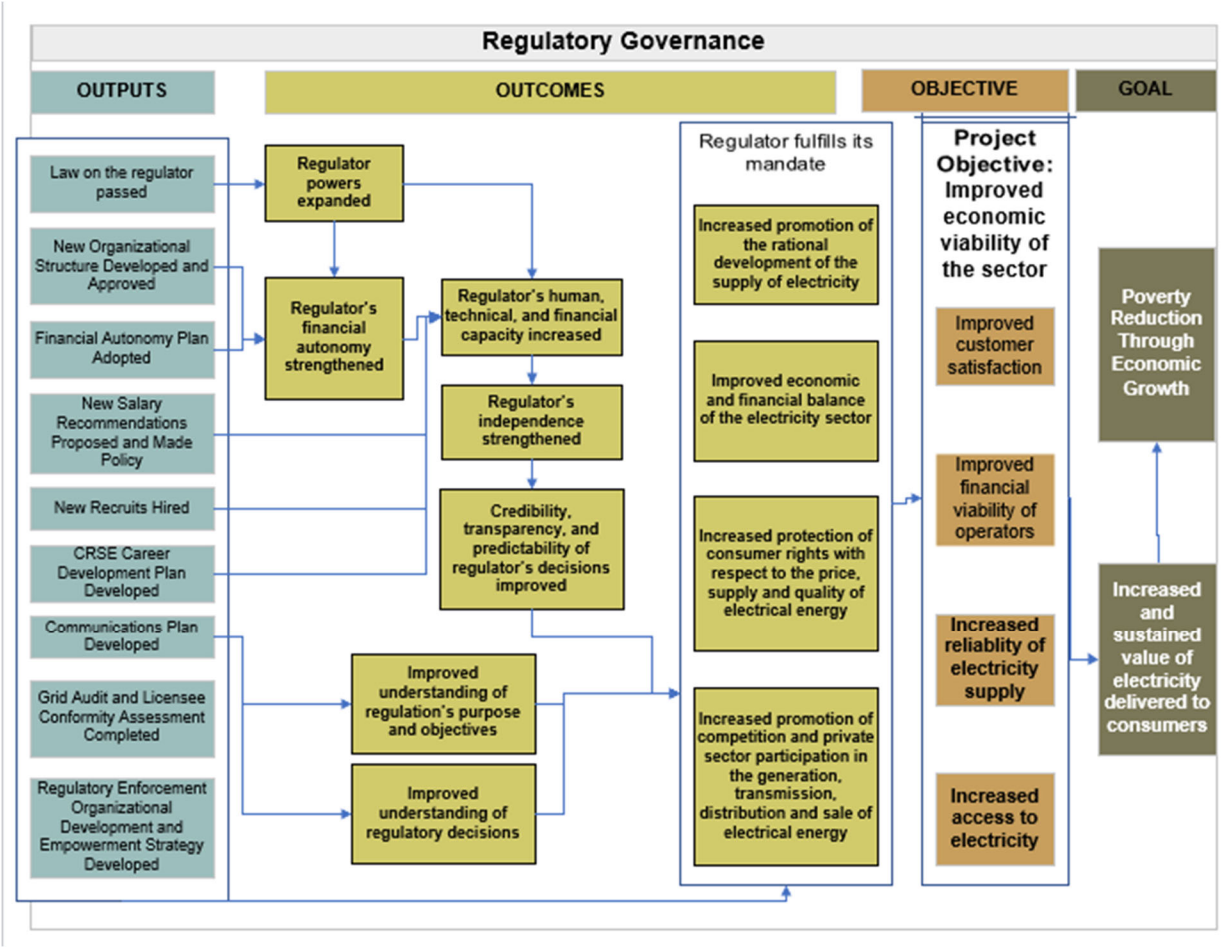
This annex will be completed with the first M&E plan revision.

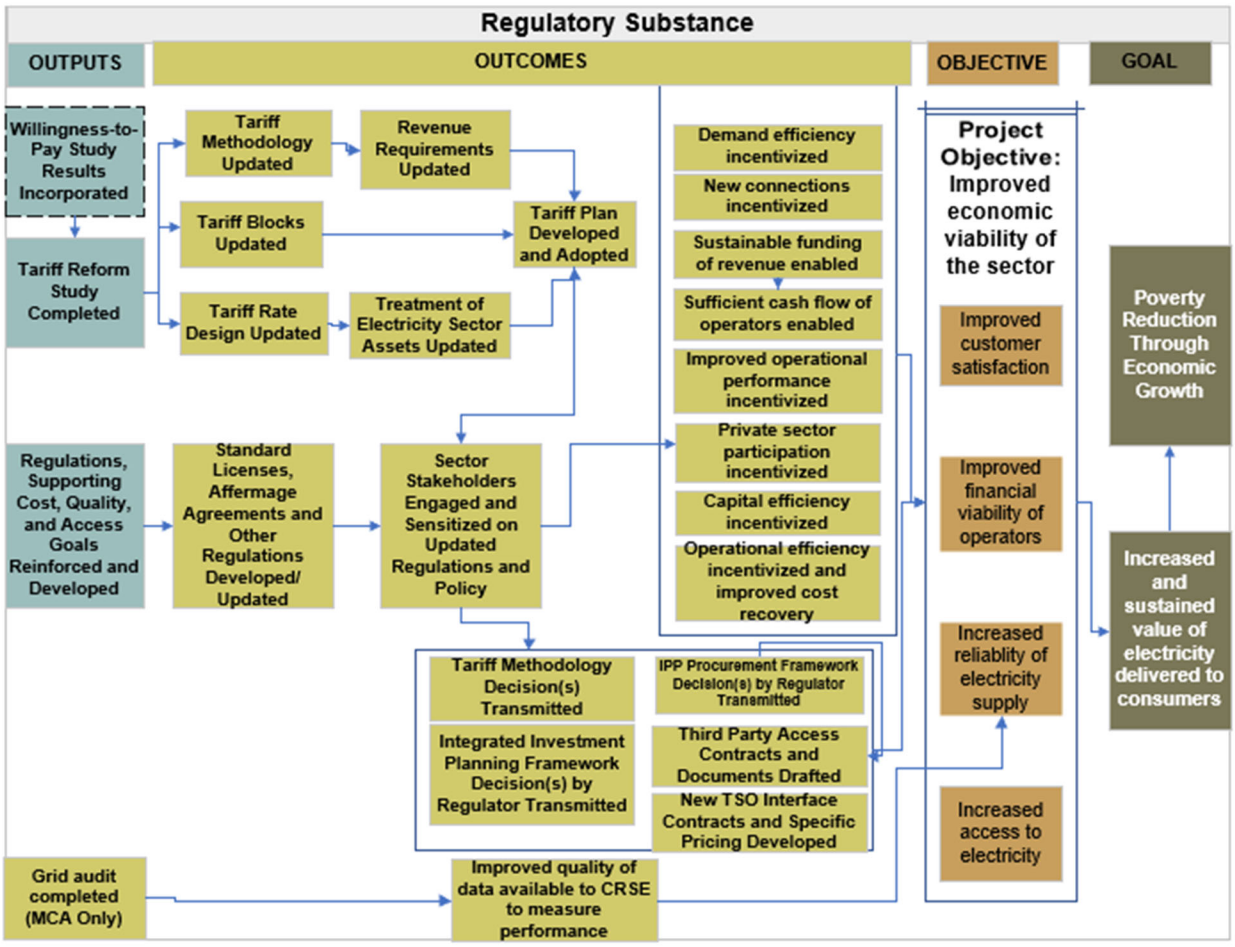
ANNEX IV: Sub-activity logics for the Reform Project

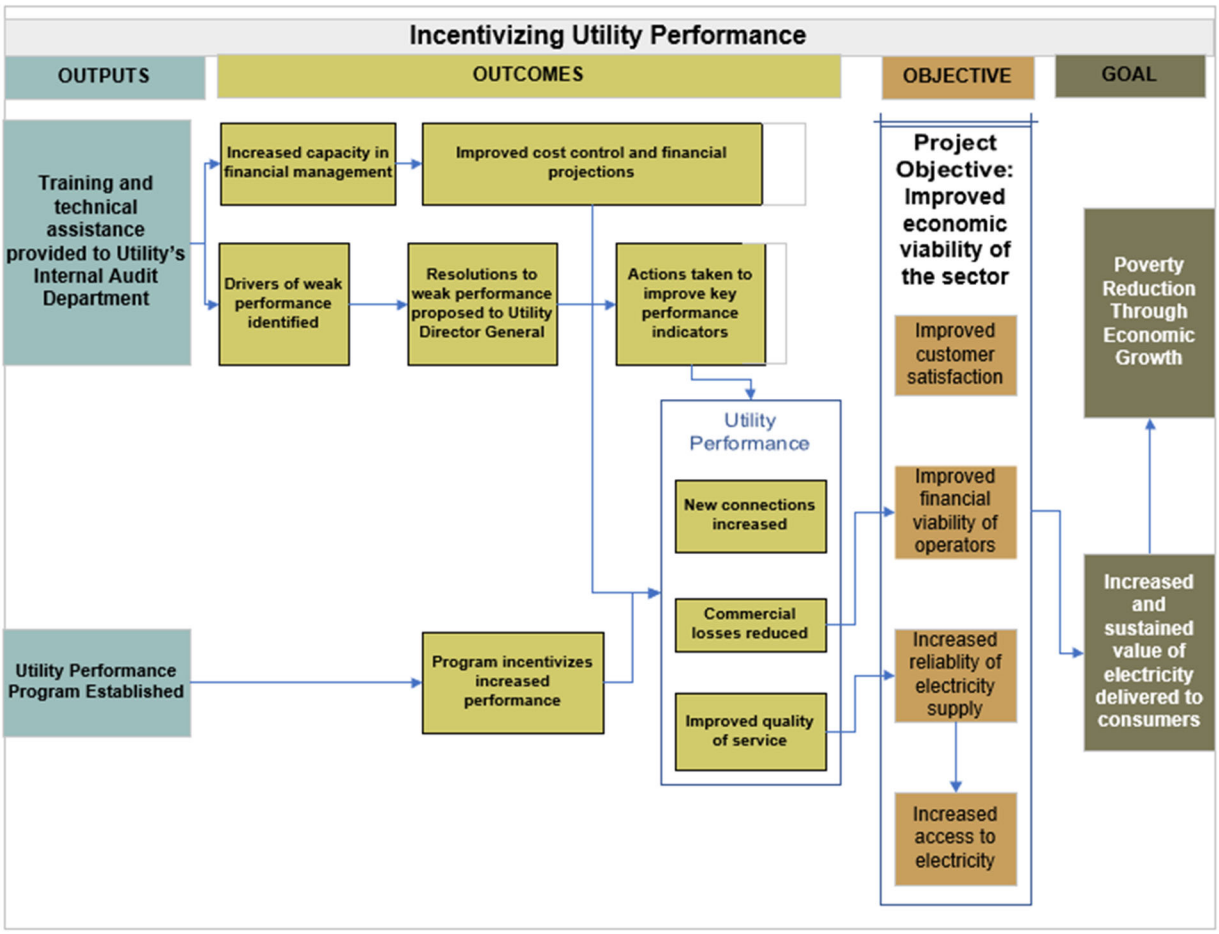


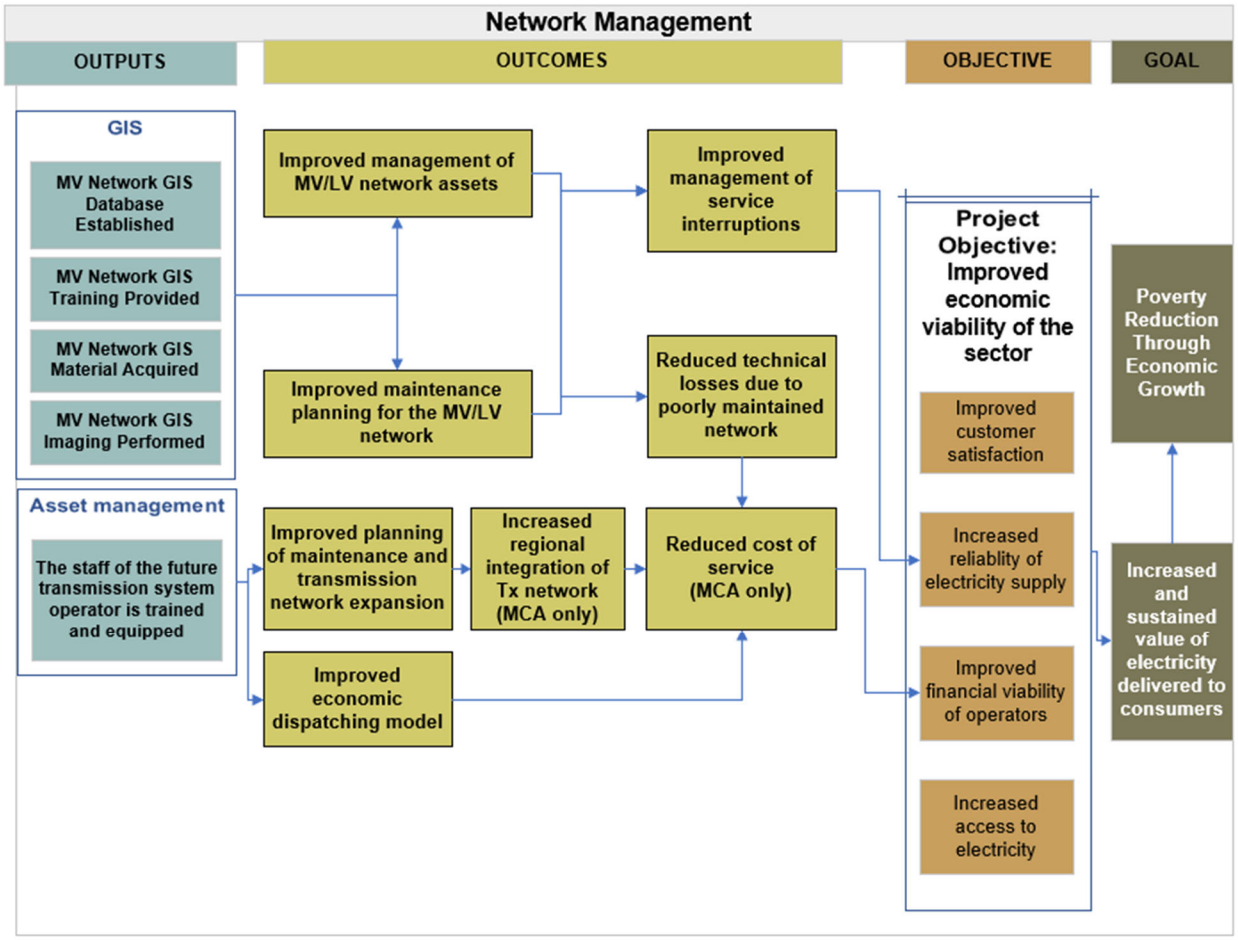

Ministry Capacity and Sector Planning
PROCESSES AND OUTPUTS
OUTCOMES
OBJECTIVE
GOAL
Affermage Transition Plan Developed
Optimized access strategy in peri-urban and rural zones
Increased access to electricity
Increased capacity in business plan development, environmental compliance, and the roll-out of single phase technology and smart metering to support tariff harmonization
Increased private sector participation in rural electrification (MCA only)
Training and Support Program for ASER Completed
Financial viability of rural on-grid and off-grid operators increased (MCC only)
Project Objective: Improved economic viability of the sector
MPE Capacity Building Plan for Integrated Planning Developed
Improved accuracy of concessionaires' billing
Improved customer satisfaction
Increased and sustained value of electricity delivered to consumers
Improved CRSE determination of GoS compensation due to concessionaires
Integrated Investment Plan Framework Adopted
Funding needs better identified for realistic rural electrification plans
Improved financial viability of operators
Integrated Sector Planning Process (Annual) Completed
Higher quality partners and services procured
Poverty Reduction Through Economic Growth
Updated Electricity Code (2022) Drafted
Increased reliablity of electricity supply
LPDSE (2025-2029) Drafted
Improved sector investment planning
Lowered contracted power pricing
Reduced cost of service
Roadmap (Annual) Recommendations Adopted
Increased access to electricity


Private Sector Participation
OUTPUTS
OUTCOMES
OBJECTIVE
GOAL
One-stop-shop ("Guichet Unique") established
Sector Investor Guide Developped (MCA only)
IPP/PSP Procurement Framework Developed
Ancillary Services Recommendations and Plan Adopted
Market Opening Transition Plan Developed
Reduced time to respond to investor requests
Increased number of approved projects
Increased private sector participation in the electricity sector
Reduced cost of service
Lowered contracted power pricing
Sustainable cash flow due to reliable/timely payment by government to utility
Reduced burden on public finances
Increased cash flow for public rural investments
Capable private sector operators for rural distribution procured
Project Objective: Improved economic viability of the sector
Improved customer satisfaction
Improved financial viability of operators
Increased reliablity of electricity supply
Increased access to electricity
Increased access to electricity
Poverty Reduction Through Economic Growth
Increased and sustained value of electricity delivered to consumers


Regulatory Governance
OUTPUTS
OUTCOMES
OBJECTIVE
GOAL
Law on the regulator passed
New Organizational Structure Developed and Approved
Financial Autonomy Plan Adopted
New Salary Recommendations Proposed and Made Policy
New Recruits Hired
CRSE Career Development Plan Developed
Communications Plan Developed
Grid Audit and Licensee Conformity Assessment Completed
Regulatory Enforcement Organizational Development and Empowerment Strategy Developed
Regulator powers expanded
Regulator's financial autonomy strengthened
Regulator's human, technical, and financial capacity increased
Regulator's independence strengthened
Credibility, transparency, and predictability of regulator's decisions improved
Improved understanding of regulation's purpose and objectives
Improved understanding of regulatory decisions
Regulator fulfills its mandate
Increased promotion of the rational development of the supply of electricity
Improved economic and financial balance of the electricity sector
Increased protection of consumer rights with respect to the price, supply and quality of electrical energy
Increased promotion of competition and private sector participation in the generation, transmission, distribution and sale of electrical energy
Project Objective: Improved economic viability of the sector
Improved customer satisfaction
Improved financial viability of operators
Increased reliablity of electricity supply
Increased access to electricity
Poverty Reduction Through Economic Growth
Increased and sustained value of electricity delivered to consumers


Regulatory Substance
OUTPUTS
OUTCOMES
OBJECTIVE
GOAL
Willingness-to-Pay Study Results Incorporated
Tariff Methodology Updated
Revenue Requirements Updated
Tariff Blocks Updated
Tariff Plan Developed and Adopted
Tariff Reform Study Completed
Tariff Rate Design Updated
Treatment of Electricity Sector Assets Updated
Regulations, Supporting Cost, Quality, and Access Goals Reinforced and Developed
Standard Licenses, Affermage Agreements and Other Regulations Developed/ Updated
Sector Stakeholders Engaged and Sensitized on Updated Regulations and Policy
Demand efficiency incentivized
New connections incentivized
Sustainable funding of revenue enabled
Sufficient cash flow of operators enabled
Improved operational performance incentivized
Private sector participation incentivized
Capital efficiency incentivized
Operational efficiency incentivized and improved cost recovery
Tariff Methodology Decision(s) Transmitted
IPP Procurement Framework Decision(s) by Regulator Transmitted
Integrated Investment Planning Framework Decision(s) by Regulator Transmitted
Third Party Access Contracts and Documents Drafted
New TSO Interface Contracts and Specific Pricing Developed
Grid audit completed (MCA Only)
Improved quality of data available to CRSE to measure performance
Project Objective: Improved economic viability of the sector
Improved customer satisfaction
Improved financial viability of operators
Increased reliablity of electricity supply
Increased access to electricity
Poverty Reduction Through Economic Growth
Increased and sustained value of electricity delivered to consumers


Incentivizing Utility Performance
OUTPUTS
OUTCOMES
OBJECTIVE
GOAL
Training and technical assistance provided to Utility's Internal Audit Department
Increased capacity in financial management
Improved cost control and financial projections
Drivers of weak performance identified
Resolutions to weak performance proposed to Utility Director General
Actions taken to improve key performance indicators
Utility Performance
New connections increased
Commercial losses reduced
Improved quality of service
Utility Performance Program Established
Program incentivizes increased performance
Project Objective: Improved economic viability of the sector
Improved customer satisfaction
Improved financial viability of operators
Increased reliablity of electricity supply
Increased access to electricity
Poverty Reduction Through Economic Growth
Increased and sustained value of electricity delivered to consumers


Network Management
OUTPUTS
OUTCOMES
OBJECTIVE
GOAL
GIS
MV Network GIS Database Established
MV Network GIS Training Provided
MV Network GIS Material Acquired
MV Network GIS Imaging Performed
Asset management
The staff of the future transmission system operator is trained and equipped
Improved management of MV/LV network assets
Improved maintenance planning for the MV/LV network
Improved planning of maintenance and transmission network expansion
Increased regional integration of Tx network (MCA only)
Improved economic dispatching model
Improved management of service interruptions
Reduced technical losses due to poorly maintained network
Reduced cost of service (MCA only)
Project Objective: Improved economic viability of the sector
Improved customer satisfaction
Increased reliablity of electricity supply
Improved financial viability of operators
Increased access to electricity
Poverty Reduction Through Economic Growth
Increased and sustained value of electricity delivered to consumers

ANNEX V: Tables documenting changes from Compact Annex III to M&E Plan

Transmission Project

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact indicator definition	M&E plan indicator	M&E plan indicator definition	Reason for change
Outcome Indicators						
Secure quality electricity supply from the lowest cost sources to meet the growing demand (Project Objective)	Provide quality electricity from the lowest cost sources available to Senelec to meet the growing demand on the interconnected network in Senegal	See below	See below	See below		The objective statement did not materially change between the Compact Annex III and the M&E plan. The M&E plan broke down the objective into outcomes related to the cost, quality, and quantity of electricity. These are described in the rows below.
Secure quality electricity supply from the lowest cost sources to meet the growing demand (Project Objective)	Increased quantity of electricity transmitted and distributed on the interconnected network	Electricity supply	Total electricity, in gigawatt hours, produced or imported in a year.	+Additional energy transmitted and distributed in the Dakar peninsula + Additional energy transmitted from added transformers	+ Incremental energy transmitted in MWh in Dakar annually due to Transmission Network Build-out Activity. It's the additional load at the fourteen substations in the Dakar peninsula. This is calculated by subtracting the maximum load the 14 Dakar substations can manage (574.8 GWh) from the actual energy departing that substation in a given period. + Incremental energy transmitted annually through the Touba, Diass, Hann, and Aeroport substations, net of transformer losses as result of MCC's investment.	The Annex III Compact indicator was meant to reflect the increase in electricity quantity. These two new indicators are more closely aligned with the CBA model and reflect the additional energy transmitted thanks to the project rather than changes in the overall electricity supply.

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact indicator definition	M&E plan indicator	M&E plan indicator definition	Reason for change
					This is calculated by subtracting the maximum load the substation can manage from the actual energy departing that substation in each period.	
Secure quality electricity supply from the lowest cost sources to meet the growing demand (Project Objective)	Increased quantity of electricity transmitted and distributed on the interconnected network	Electricity demand met	Electricity generated in Senegal plus Electricity imports minus non-distributed energy in a single year	Same as above	Same as above	Same as above
Secure quality electricity supply from the lowest cost sources to meet the growing demand (Project Objective)	Increased quantity of electricity transmitted and distributed on the interconnected network	Electricity sales	Total electricity sales for HV, MV, and LV customers as reported by Senelec	Number of load shedding events experienced by customers	Number of load shedding events recorded in a year	Same as above
Secure quality electricity supply from the lowest cost sources to meet the growing demand (Project Objective)	Reduced generation costs	Share of the electricity supply dispatched from non-HFO sources	Number of megawatt hours of electricity from non-HFO generation sources produced or imported in a year / Total number of megawatt hours in a year produced or imported in a year	Average kWh generation cost	Weighted average of generation costs from all sources	There is no material change between the Compact and M&E plan indicators.
Secure quality electricity supply from the lowest cost	Customers experience fewer service interruptions and			Total non-distributed energy on the network	Estimation of all non-distributed energy	Indicator added as an alternative way to

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact indicator definition	M&E plan indicator	M&E plan indicator definition	Reason for change
sources to meet the growing demand (Project Objective)	voltage fluctuations				from service interruptions	measure electricity quality.
Secure quality electricity supply from the lowest cost sources to meet the growing demand (Project Objective)	Customers experience fewer service interruptions and voltage fluctuations			Customers experiencing at least one service interruption*	[Sum of customers stating they have experienced at least one service interruption in the last days based on a representative sample of all electricity customers in Senegal / total number of survey respondents] X 100	Indicator added as an alternative way to measure electricity quality.
Secure quality electricity supply from the lowest cost sources to meet the growing demand (Project Objective)	Customers experience fewer service interruptions and voltage fluctuations			Average number of service interruptions experienced*	[Sum of service interruptions in the last seven days reported by a representative sample of all electricity customers in Senegal / total number of survey respondents]	Indicator added as an alternative way to measure electricity quality.
Secure quality electricity supply from the lowest cost sources to meet the growing demand (Project Objective)	Customers experience fewer service interruptions and voltage fluctuations			Average duration of service interruptions experienced*	[Sum of the average duration of all service interruptions in the last seven days reported by a representative sample of all electricity customers in Senegal / total number of service interruptions reported]	Indicator added as an alternative way to measure electricity quality.
Increased financial viability of sector	Increased financial viability of sector	Quasi-fiscal deficit	Net revenue of an efficient utility minus cash collected by the utility in a year. See Trimble et al (2016) for full definition	-		This result is only indirectly related to the Transmission Project. Its indicators are in the Reform Project.
Reduced consumer tariff	Reduced generation costs	Average consumer tariff	Sum of consumer tariffs for all consumer categories	Average kWh generation cost	Weighted average of generation costs from all sources	The link between the decrease in generation costs and tariffs depends on the tariff regime, which is

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact indicator definition	M&E plan indicator	M&E plan indicator definition	Reason for change
			divided by number of consumer categories			addressed in the Reform Project results and indicators.
Increased revenue for power producers	Increased revenue for power producers	TBD	TBD	-		This result is related to the Reform Project. It will be measured in the Reform Project.
Reduced energy expenditures		TBD		TBD		The M&E plan does not include indicators for results beyond the Project Objective and benefits modeled in the CBAs. These higher-level outcomes will be assessed through the independent evaluations where feasible to do so.
Reduced damage to equipment		TBD		TBD		
Increased production certainty		TBD		TBD		
Reduced production costs and increased productivity of firms		TBD		TBD		
Decreased costs associated with restarting production		TBD		TBD		
Improved network reliability and stability	Improved network reliability and stability	Non-distributed energy	Estimate of how much electricity would have been distributed had there not been a service interruption caused by lack of generation, incidents, load shedding by HV customers, maintenance works, overloaded transformers or lines, and load shedding due to LV.	System Average Interruption Duration Index (SAIDI)*	Sum of durations, in customer-hours, of all customer interruptions in a quarter / Total number of customers connected to transmission network in the same quarter	It is expected from the Network reliability and stability a reduction in the frequency and duration of outages. This is why the indicator is changed. However, non-distributed energy always remains a measure of reliability and is measured
				System Average Interruption Frequency Index (SAIFI)*	Sum of customer-interruptions in a quarter / Total number of customers connected to network in the same quarter	
				Customer perception of service quality*	[Sum of customers stating they have very good or good perception of the quality of the electricity services based on a representative sample of all electricity customers in Senegal / total number of survey respondents] x 100	

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact indicator definition	M&E plan indicator	M&E plan indicator definition	Reason for change
Consumers experience less service interruptions and voltage fluctuations	Customers experience fewer and shorter service interruptions and voltage fluctuation	(P-21) System Average Interruption Duration Index (SAIDI)	Sum of durations, in customer-hours, of all customer interruptions in a quarter / Total number of customers connected to network in the same quarter.	Number of load shedding events experienced by customers	Number of load shedding events recorded in a year	The result is revised to capture the *duration* of interruptions as well as the *frequency*.
				Total non-distributed energy on the network	Estimation of all non-distributed energy from service interruptions	
		(P-22) System Average Interruption Frequency Index (SAIFI)	Sum of customer-interruptions in a quarter / Total number of customers connected to network in the same quarter.			
Increased integration of renewables	Increased integration of intermittent renewable energy	(P-26) Share of renewable energy in the country	Total installed generation capacity of on- or off-grid renewable energy, in megawatts / Total installed generation capacity	See below		See below
		Share of renewable energy in electricity supply	Total generation of electricity from renewable energy sources, in gigawatts in one year / total generation of electricity in one year	Intermittent energy curtailment*	Planned (or deemed) quantity of electricity generated from all solar and wind sources in a year minus Actual quantity of electricity generated from solar and wind sources in a year	This indicator gets at the utilization of renewable intermittent power plants. It is meant to capture the actual generation of intermittent and renewable energy plants compared to what could be generated considering installed capacity and climactic conditions.

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact indicator definition	M&E plan indicator	M&E plan indicator definition	Reason for change
				Capacity factor of solar energy power plants*	(Net annual electricity generated (MWh) from solar power plants / (24 hours*365.25 days)) / Installed capacity of solar power plants (MW)	Same as above
				Capacity factor of wind energy power plants*	(Net annual electricity generated (MWh) from wind power plants / (24 hours*365.25 days))/ Installed capacity wind power plants (MW)	Same as above
				Electricity from intermittent sources	[Electricity transmitted on the interconnected network from solar and wind power plants / all energy transmitted on the interconnected network excluding electricity from gas power plants] X 100	The only difference with the new indicator is that it defines “intermittent renewable” as wind and solar and excludes electricity from gas in its calculation. Gas is excluded because of the disproportionate effect that the introduction of gas will have on the overall energy mix.
Reduced generation costs	Reduced generation costs	Generation cost	Average variable cost of generating one kWh of electricity of Senelec and IPPs.	Average kWh generation cost	Weighted average of generation costs from all sources	The indicator name has been modified to be more consistent with the definition
Increased reserve margin	-	Reserve Margin	Installed capacity less peak load, as a percentage of peak load.	-	-	The result is removed from the project logic as the sector experts no longer think the Compact will directly contribute to this result.
		Quantity of available reserve	TBD			
Increased dispatching of least-cost generation sources	Increased dispatching from least cost-sources	Utilization of renewable energy power plants	Actual number of megawatt hours	Least-cost generation*	Quantity of energy dispatched from 10% of the least expensive generation units in a	Lower-cost generation is more accurate to determine whether the least cost sources of

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact indicator definition	M&E plan indicator	M&E plan indicator definition	Reason for change
			generated in a year from renewable energy power plants / Maximum annual load from renewable energy power plants		quarter / Total quantity of energy dispatched in a quarter	electricity are being dispatched. There are additional indicators (above) for the "increased integration of intermittent renewable energy", which are complementary.
-	Reduced new development of thermal generation capacity	-	-	Thermal generation capacity development	(Number of megawatts in new installed thermal generation capacity divided total installed generation capacity on one year) x 100	Indicator is added to measure the proportion of thermal generation in new generation
Voltage fluctuations controlled and reduced	Frequency and voltage fluctuations controlled and reduced	Voltage stability	Number of hours that the voltage level is within +/- 10 % of its expected level in one year / Total number of hours in a year.	Voltage stability*	[Number of hours during which the voltage is +/- 5% of the acceptable level on 225 kV and 90 kV lines / divided by number of hours in the period] X 100	The result in Annex III only had an indicator for voltage stability, while the result incorporates both frequency and voltage stability. Both are results of the project.
				Frequency stability*	[Number of hours during which the frequency level is between 47.5 Hz and 52.5 Hz / number of hours during the period] X 100	
Improved response time of power producers	-	Compliance with standard response time as defined by the regulator	Power producers with response time that complies with the regulator's standard / total number of power producers	-	-	This result does not appear in the Transmission Project logic diagram in the Compact
Increased electricity quantity transmitted		Quantity of electricity	Total quantity of electricity in		Incremental energy transmitted in MWh in	Transmission network Build-out Activity area

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact indicator definition	M&E plan indicator	M&E plan indicator definition	Reason for change
and distributed on network	Increased quantity of electricity transmitted and distributed on the interconnected network	distributed to substations in the Dakar area	MWh distributed to substations in the Dakar area per quarter	Additional energy transmitted and distributed in the Dakar peninsula	Dakar annually due to Transmission Network Build-out Activity. It's the additional load at the fourteen substations in the Dakar peninsula. This is calculated by subtracting the maximum load the 14 Dakar substations can manage (574.8 GWh) from the actual energy departing that substation in a given period. The load flow model estimated the maximum load would be attained in 2023.	has been reviewed. Instead of the Dakar region, the results are limited to Dakar peninsula. This result has been incorporated into the Project Objective.
Improved efficiency of high-voltage network	-	Network performance	Total megawatt hours billed / Total megawatt hours transmitted out from power plants	-	-	The Project is not expected to have a measurable effect on transmission system losses. The result from Annex III of the Compact on "Improved efficiency of high-voltage network" has been removed from the project logic in this initial M&E plan.
		(P-18) Transmission system technical losses (%)	1- [Total MWh transmitted out from transmission substations / Total MWh hours received from generation to transmission substations]			
Reduced congestion on over-utilized lines and substations	Reduced congestion on overutilized lines and substations	Substation capacity factor or transmission	TBD	Sub-station overloading	[Weighted average of the Non-coincident Peak Load (MVA) of the Touba, Diass, Hann, and Aeroport	The indicator replaces a TBD.

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact indicator definition	M&E plan indicator	M&E plan indicator definition	Reason for change
		system utilization			substations / Weighted average of the Firm Capacity in Contingency (N-1) (MVA) the Touba, Diass, Hann, and Aeroport substations] X 100	
Substation transformer losses are reduced	Reduced transformer losses	Substation transformer losses	1 – [Quantity of electricity in MWh distributed to transformers rehabilitated with MCC funds / Quantity of electricity leaving MWh transformers rehabilitated with MCC funds]	Transformer losses*	(1 – (Quantity of electricity in MWh distributed to posts rehabilitated with MCC funds / Quantity of electricity leaving MWh transformers rehabilitated with MCC funds X 100	No material changes in the indicator.
Reserve capacity from battery storage installed	Operating reserve strategy implemented	Batteries installed	Number of batteries installed under the Program	Number of batteries installed	Number of batteries installed as defined in the operating reserve strategy	No material changes to indicator
		Storage capacity installed	Total capacity in ampere-hours of batteries installed with funding	Battery storage capacity installed	Total capacity in ampere-hours of battery storage	
-	Operating reserve strategy implemented	-	Senelec develops a spinning reserve strategy approved by its board of directors, which includes at least three	Power generation capacity equipped with speed and voltage regulator*	The sum of generation capacity in MVA with a speed and voltage regulator divided by the sum of all generation capacity. Rental generation (e.g., Aggreko) and sub-regional units are excluded (Manatali, Felou)	This result is on Transmission Project logic but has not been included in the indicator table

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact indicator definition	M&E plan indicator	M&E plan indicator definition	Reason for change
			types of reserve: primary (10 minutes), secondary (30 minutes), and tertiary.	Execution rate of the operating reserve strategy	(Value of executed contracts supporting the reserve strategy divided by the total estimated cost of the strategy's action plan) x 100	This indicator was added to reflect an important assumption between the installation of batteries and their effects on network reliability
-	Battery storage used	-	-	Quantity of energy injected on the network from the newly installed batteries	Quantity of energy injected on the network from the newly installed batteries	
Outputs Indicators						
Spinning reserve strategy is developed and adopted	Operating reserve strategy developed and adopted	Spinning reserve strategy is developed and adopted	Senelec develops a spinning reserve strategy approved by its board of directors, which includes at least three types of reserve: primary (10 minutes), secondary (30 minutes), and tertiary.	Date at which operation reserve strategy adopted	-	The Compact uses "spinning reserve" instead of "operation reserve" which is more specific because it includes the spinning and non-spinning reserves and storage batteries
Undersea cables and transmission lines/circuits constructed or rehabilitated	Undersea and underground cables constructed	(P-7) Km transmission lines upgraded or built	The sum of linear kilometers of new, reconstructed, rehabilitated, or upgraded transmission lines that have been energized,	(P7) Kilometers of transmission lines upgraded or built	The sum of linear kilometers of new, reconstructed, rehabilitated, or upgraded transmission lines that have been energized, tested and commissioned with MCC's support	No material changes to the result or indicator. Two results were combined in one.

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact indicator definition	M&E plan indicator	M&E plan indicator definition	Reason for change
			tested and commissioned with MCC support.			
Increased capacity of transmission lines	Undersea and underground cables constructed	(P-8) Transmission throughput capacity added	Throughput capacity, in megawatts, added by new, reconstructed, rehabilitated, or upgraded transmission lines that have been energized, tested and commissioned with MCC support.	(P8) Transmission throughput capacity added	The increase in throughput capacity, measured in megawatts, added by new, reconstructed, rehabilitated, or upgraded transmission lines that have been energized, tested and commissioned with MCC support	
Substations modified and capacity increased	Substations constructed or expanded	-	-	Number of sub-stations constructed or expanded	Sum of air-insulated and gas-insulated substations constructed or expanded with MCC funds	The result statement was modified to focus mor specifically on the added capacity of transformers. The M&E plan also includes two indicators to capture the number of substations and the amount of added capacity. The result is related to both "Dakar Transmission Network Build Out" and "Transformer replacement" activities.
	Transmission substation capacity added	(P-9) Transmission substation capacity added	The total added transmission substation capacity, measured in megavolt amperes, which is energized, commissioned and accompanied by a test report and supervising engineer's certification resulting from	(P-9) Transmission substation capacity added	The total added transmission substation capacity, measured in megavolt amperes, that is energized, commissioned and accompanied by a test report and supervising engineer's certification resulting from new construction or refurbishment of existing substations that is due to MCC support	

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact indicator definition	M&E plan indicator	M&E plan indicator definition	Reason for change
			new construction or refurbishment of existing substations that is due to MCC support.			
Transformers constructed or rehabilitated	Transformers upgraded or replaced	NA	NA	Number of transformers upgraded or replaced	The sum of transformers that are upgraded or replaced with MCC funding through the Transformer Replacement Activity	This result was included in the Annex III logic diagram, but not in the indicator table. This output indicator rectifies the omission from Annex III.
-	Remote load shedding special protection system established	-	-	Date of receipt of remote load-shedding equipment	Date on which remote load shedding equipment is acquired and received so that it can play its role as defined in the operating reserve strategy	This output result was added to the project logic as the planned Activity became more defined. This system is referred to as a "network management improvement" in annex I of the Compact.

Access Project

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact indicator definition	M&E plan indicator	M&E Plan Indicator definition	Reason for change
Outcome Indicators						
Increased number of household s/ firms connected to the grid	Increased number of households, firms, and critical social infrastructure connected to the grid	(P-25) Percentage of households connected to the national grid	Number of households that have access to a legal connection to electricity service from an electrical utility or service provider / Total number of households in the country.	Percentage of households connected to the national grid	Number of households that have access to a legal connection to electricity service from an electrical utility or service provider / Total number of households in the country.	The result is revised to include "critical social infrastructure" (such as schools or health centers). The Compact states that "During detailed design, MCC and the Government shall also endeavor to identify critical social infrastructure (…) to determine if they can feasibly be connected". The indicator "Customers added by project" is added to measure new connections that result from MCC's investments while the previously included indicator (P-25) encompasses all connections nation-wide.
				Customers added by project	The number of new customers that have gained access to a legal connection to electricity service from an electrical utility or service provider.	
Increased demand and supply of quality electricity in rural areas of Senegal	Improved supply and demand for quality electricity in rural and peri-urban areas of Senegal (PROJECT OBJECTIVE)	Electricity consumption in MCC's intervention areas	The quantity of electricity consumed annually among the population of the target departments	Electricity consumption for domestic use	The total Megawatt hours of electricity consumed annually for domestic uses by the population gaining access to a legal electricity connection through the project.	"Peri-urban" is added to the result statement to be consistent with the Project Objective as stated in Article 1 of the Compact. Electricity consumption is broken down into domestic and productive use to be consistent with the project logic and CBA model.
		Electricity consumption in MCC's intervention areas	The quantity of electricity consumed annually among the population of the target departments	Electricity consumption for productive use	The total Megawatt hours of electricity consumed annually for productive uses by the population gaining access to legal electricity connection through the project	
Increased demand	Improved supply and demand for quality	Land value	The amount of rent income that Project Beneficiaries earned in a calendar year	None		Land value was removed from the indicator tables. Although it was modeled in the CBA, it is not aligned

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact indicator definition	M&E plan indicator	M&E Plan Indicator definition	Reason for change
and supply of quality electricity in rural areas of Senegal	electricity in rural and peri-urban areas of Senegal (PROJECT OBJECTIVE)					with the project logic. The independent evaluation may still assess land value to estimate the project's economic rate of return.
Increased electricity coverage in focus rural areas	Improved electricity coverage in intervention areas	Electricity coverage	1 – [individuals living in electrified localities divided / the total population of the area]	Electrified localities	The total number of localities electrified with MCC funding. A locality is considered electrified when there is at least one legal connection to the network.	The revised indicator is considered adequate for measuring the result. It is simpler than the indicator in the Compact since it does not require additional information on the populations of the localities.
Decreased connection cost for rural households	-Improved electricity access in intervention areas	Increased share of households in the project area that are located within 35 meters of the grid	Households located 35/45 meters or less from the grid divided by total households in the area	Electricity access in project areas-	The population with effective access to electricity divided by the total population of the area.	The routes of the planned lines are optimized to cover all households within 35 / 45m, so the indicator is changed to be less specific. The result name is also modified because, since the target communities did not previously have access to grid electricity, the result should not speak to a "decreased connection cost."
Improved performance and reliability of the distribution network	Improved performance and reliability of the distribution network	(P-19) Distribution system losses	1 – [Total megawatt hours billed / Total megawatt hours received from transmission].	Distribution system losses	1 – [Total megawatt hours billed / Total megawatt hours received from transmission]	No change
	Reduction of Service Interruptions	(P-21) System Average Interruption Duration Index (SAIDI)	Sum of durations, in customer-hours, of all customer interruptions in a quarter / Total number of customers connected to network in the same quarter.	System Average Interruption Duration Index (SAIDI) in MCC intervention areas*	Sum of durations, in customer-hours, of all customer interruptions in a quarter / Total number of customers connected to network in the same quarter	"Reduction of Service Interruptions" added to distinguish the between the efficiency/performance and the reliability of the grid.

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact indicator definition	M&E plan indicator	M&E Plan Indicator definition	Reason for change
	Reduction of Service Interruptions	(P-22) System Average Interruption Frequency Index (SAIFI)	Sum of customer-interruptions in a quarter / Total number of customers connected to network in the same quarter.	System Average Interruption Frequency Index (SAIFI) in MCC intervention areas*	Sum of customer-interruptions in a quarter / Total number of customers connected to network in the same quarter, in MCC intervention areas	Same as above
	Reduction of technical losses	-	-	Avoided technical losses	Avoided technical losses on lines improved with MCC funding.	The result "reduction of technical losses" is added to better align with the feasibility study's technical analysis underlying the investments under the "Distribution network Reinforcement" Activity.
	Improved electricity technical service quality for customers	-	-	Non-distributed energy on the distribution network	Quantity of non-distributed energy caused by under-frequency resulting from distribution network outages	This result/indicator matches a key, intended benefit stream modelled in this Activity's CBA model.
Improved knowledge, of energy efficiency standards and equipment	Good knowledge of standards and equipment with high energy efficiency	Knowledge of energy efficiency standards and equipment	Percent of individuals receiving a 'passing grade' on a survey assessing their knowledge, attitudes, and practice of energy efficiency standards and equipment	Level of consumer knowledge of energy efficiency standards and equipment*	Percentage of survey respondents stating that they have 'very good' or 'good' knowledge of energy efficiency standards and equipment	The scope of the education campaign component is limited to the intervention areas of the Access Project instead of at the national level. Indicators correspond to the different modules of the education campaign.
	Improved consumer knowledge on the key elements of the service regulations and the standards and obligations of Senelec and the			Level of knowledge of the key elements of the service regulations and the standards and obligations in force at the level of Senelec and dealers by consumers*	Percentage of survey respondents stating that they have very good or good knowledge of the key elements of the service regulations and the standards and obligations in force at the level of Senelec and dealers by consumers	

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact indicator definition	M&E plan indicator	M&E Plan Indicator definition	Reason for change
	concessionaires			Level of household understanding of the connection process*	Percentage of survey respondents stating that they have Very good or good knowledge of the connection process	
				Level of knowledge of network connection time*	Percentage of survey respondents stating that they have 'very good' or 'good' knowledge of network connection time	
Increased efficient consumption of electricity	Adoption of electrical efficiency practices	Adoption of energy efficient practices	Percent of individuals receiving a 'passing grade' on a survey assessing their knowledge, attitudes, and practice of energy efficiency standards and equipment	Adoption rate of attitudes and practices related to energy efficiency equipment and standards*	Percentage of survey respondents stating that they are fully or partially adopting attitudes and practices related to energy efficiency equipment and standard	These indicators are deemed superior at measuring changes in adopting energy efficiency practices in communities previously unconnected to the grid.
				Percentage of households using energy-efficient appliances*	The number of households using energy-efficient appliances divided by the total number of households with access to electricity in MCC intervention areas.	
Level of electricity service is enhanced for the same cost	-	Enhanced electricity service	Percent of grid-connected customers (firms, households, and services) who state that they use more electricity, because of their adoption of energy efficient behaviors or products. This includes, but is not limited to, an increase in hours of electricity use and the purchase of additional electrical equipment.	-		These results are deleted because the education campaign has been rescoped to only the Access project intervention areas rather than to be at the national level.
Energy savings for	-	Savings in electricity bills	Percent of grid-connected customers experiencing savings in their electricity bills after adopting an	-		

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact indicator definition	M&E plan indicator	M&E Plan Indicator definition	Reason for change
electricity consumers			energy efficient product or process.			
Energy savings for electricity consumers	-	Average annual energy savings of grid-connected customers	Average amount of money that grid connected customers save in one month after adopting an energy efficient product or process times 12	-		
Electricity consumers value service that Senelec provides	Improved customer confidence in and satisfaction with Senelec and concessionaires	Electricity consumers' value of Senelec's services	Percent of electricity consumers (in rural areas of Senegal) who state that Senelec's services are "important" or "very important" to their well-being	Customer satisfaction index*	Percentage of survey respondents stating that they are satisfied or very satisfied with the quality of electricity they receive from their service provider	The result and indicators are revised to see if customers value their electricity service by asking about their 'satisfaction'.
Electricity consumers have greater trust in Senelec	Improved customer confidence in and satisfaction with Senelec and concessionaires	Electricity consumers' trust in Senelec's services	Percent of electricity consumers (in rural areas of Senegal) who state that they trust Senelec to provide quality services	Customer confidence index*	Percentage of survey respondents stating that they have trust in their electricity service provider	Customer satisfaction index and customer confidence are both deemed important for measuring the achievement of this result. However, this result aligns better with the intended outcomes of the education campaign sub-activity, and perhaps will be revisited during the next revision.
Decreased number of consumers disconnecting	-	Number of grid-connected customers disconnecting	Number of grid-connected customers who disconnect in a single year in the target intervention areas	-		This result/indicator is deleted because measuring the change in "consumers disconnecting" would not be useful since the education campaign will only take place in previously unconnected areas of Senegal.
Unconnected households and firms understand the	Improved consumer knowledge on the key elements of the service regulations and the	Understanding of the connection process	Percent of households and firms who respond correctly to at least 75% of survey questions on the connection process	Level of household understanding of the connection process*	Percentage of survey respondents stating that they have Very good or good knowledge of the connection process	See result above

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact indicator definition	M&E plan indicator	M&E Plan Indicator definition	Reason for change
process for connecting to the grid	standards and obligations of Senelec and the concessioners					
Households and firms understand electricity as an input to income-generating activities	Improved appreciation of households and enterprises of the role of electricity as an input to income-generating activities	Household understanding of electricity as an input to income-generating activities	Percent of households who can cite at least one productive use of electricity	Level of perception of households and businesses on the role of electricity as an input to income-generating activities in the areas of intervention of the MCC (Commune or Locality) *.	Percentage of households and businesses respondents stating that the role of electricity as an input to income-generating activities is Very important or Important	Indicator is changed to be more relevant for measuring the result.
-	Improved availability of equipment for connections	-	-	Level of perception of households in relation to the availability of equipment for connections in the areas of intervention of the MCC (Municipality or Locality) *	Percentage of survey respondents stating that equipment for connections are 'very available' or 'available'	Result and indicator are added because they are related to supporting connections sub-activity
Local stakeholders better understand the energy needs of the rural poor	-	Number of local organizations promoting rural electrification efforts	Number of local government offices and civil society organizations that have taken concrete steps to promote access to electricity	-	-	Because this project no longer intends to have separate "national" and "regional" education campaign sub-activities, the logic was reorganized to include only one "education campaign" sub-activity, decreasing the number of results/indicators. Existing indicators can be disaggregated to measure the specific impact on the rural poor during a future M&E Plan revision.
Rural poor have better access to information regarding rural electrification projects	-	Percent of rural poor with better access to information on rural electrification projects	Percent of rural population that is very poor, poor, or almost poor (according to World Bank definitions) who correctly cite rural electrification projects occurring in their department	-	-	
Improved design,	-	TBD	TBD	-		

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact indicator definition	M&E plan indicator	M&E Plan Indicator definition	Reason for change
planning, and implementation of rural electrification efforts						
Improved customer communications and relations	Improved communications and client relationships	Customer satisfaction index	Rating of customer service (technical and non-technical) by customers	Degree of customer satisfaction with the relationships and communication developed by electricity suppliers*	Percentage of survey respondents stating that they are very satisfied or satisfied with the electricity suppliers' client relations and communication.	The indicator is revised to be more relevant for measuring the result.
Improved inventory management	Improved inventory management and availability of technical resources	Time to connect	Average number of days that between when a new customer pays the electricity service provider and when s/he is effectively connected	Number of stock-outs	The number of stock-outs of electrical meters per year	Two new indicators are added to better align with Senelec's connections action plan.
				Time to first visit	Average number of days between when a new consumer makes initial demand and the day the operator conducts his first visit	
				Time to connect	Average number of days between when a new customer pays the electricity service provider and when s/he is connected	
Potential customers connected with reliable service provider	Improved access of targeted customers to reliable service providers	Number of potential customers linked to service providers needed for establishing new connection	TBD	Level of client satisfaction with providers*	Percentage of survey respondents stating that they are Very satisfied or satisfied with providers in rural areas	The new result and indicator are considered more appropriate. The M&E Plan's indicator is both more feasible to measure and signals if improved client satisfaction, which is a step towards increasing connections, is being achieved. This result/indicator might be

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact indicator definition	M&E plan indicator	M&E Plan Indicator definition	Reason for change
						further revised during the M&E Plan revision.
Increase in number of qualified and competent electrical technicians	Increase in the number of qualified and competent electricians for inside wiring	Number of qualified and competent electrical technicians	Number of electrical technicians in the target intervention areas	Proportion of qualified and competent electricians for inside wire in MCC intervention areas*	Number of electricians qualified and competent in inside wiring/total number of electricians in MCC intervention areas	Result and indicator are revised to better reflect the Activity's intended outcomes.
	Increased number of electricians qualified to do interior wiring			Qualified electricians*	Number of electricians qualified to do interior wiring for new connections per 1,000 clients in MCC's intervention areas	
Equipment suppliers pursuing market opportunities in target intervention areas	Equipment suppliers seek and exploit market opportunities in the project areas	Number of equipment suppliers marketing in the target intervention areas	Number of equipment suppliers actively engaged in developing business in the target intervention areas.	Number of equipment suppliers operating in project areas	Number of suppliers involved in the MCC intervention areas	No material changes.
Equipment meeting needs of low-income households are available	Equipment available in the market meet the needs of low-income households	Availability of electrical equipment	Percent of rural population who know where to and have the ability to purchase electrical equipment that they demand	Satisfaction rate with acquired equipment*	Percentage of survey respondents stating that they are satisfied or very satisfied with acquired equipment	The outcome statement in the M&E plan is more appropriate. The satisfaction rate goes beyond just measuring the availability of equipment to also see if the equipment is properly meeting the needs of the intended beneficiaries.
Appropriate financial products are available	Adapted financial products are available to low-income households	Percent of financial institutions who offer new pro-poor financial products	Number of financial institutions participating in MCC-funded technical assistance who offer financial products adapted to the needs of the rural poor / Total number of financial institutions participating in MCC-funded technical number	Satisfaction rate with financial products*	Percentage of survey respondents stating that they are satisfied or very satisfied with financial products	The result has been modified to reflect both the financial institution and consumer perspectives.
	Financial institutions have an			Number of credits granted for access to equipment	Numbers of credits granted for access to equipment in	

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact indicator definition	M&E plan indicator	M&E Plan Indicator definition	Reason for change
	improved understanding of the needs of low-income households				MCC intervention areas	
Increased ownership of electrical appliances and equipment	Increased use of electrical equipment	Ownership of electrical appliances and equipment	Rural households with an electricity connection in the target intervention areas who own at least one electrical appliance	Electrical equipment uses	Number of households and businesses owning or renting at least one electrical appliance in the project's target departments / total number of households and businesses in these departments	The indicator replaces "ownership" with "use" because ownership is not the only way that households are able to access equipment. Community ownership and renting are also possible.
Output Indicators						
Distribution lines Constructed Increased coverage	Medium and low voltage lines built and transformers installed	Km distribution lines upgraded or built (P-10)	The sum of linear kilometers of new, reconstructed, rehabilitated, or upgraded distribution lines that have been energized, tested and commissioned with MCC support.	Kilometers of distribution lines upgraded or built (P-10)	The sum of linear kilometers of new, reconstructed, rehabilitated, or upgraded distribution lines that have been energized, tested and commissioned with MCC support.	"Transformers installed" is added to accurately reflect the infrastructure planned under the Supply-Side Activity. This was included in the Compact's Annex I but not Annex III.
				Transformers installed	Total number of transformers installed with MCC support	
Distribution lines are looped	-	Distribution lines looped	Kilometers of distribution lines looped with MCC assistance	-		This output is reflected by the "Kilometers of distribution lines reinforced" result.
Distribution lines are upgraded	Reinforced distribution lines	Circuit breakers added	Number of circuit breakers added to the distribution network in accordance with the contract's technical specifications	Remote-controlled recloser circuit breakers	The total number of remote-controlled recloser circuit breakers installed with MCC funding and receiving provisional	No material changes.

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact indicator definition	M&E plan indicator	M&E Plan Indicator definition	Reason for change
					acceptance from MCA Senegal II	
		Switchgear added	Number of power switches added to the distribution network in accordance with the contract's technical specifications	Switches installed	Total number of switches installed with MCC support	No material changes.
		Installation of fault detectors	Number of fault detectors	Fault indicators with tele-indication	Total number of fault indicators with tele-indication installed with MCC funding and receiving provisional acceptance from MCA Senegal II	No material changes.
		Grid attachments added	Number of grid attachments installed in accordance with the contract's technical specifications	Attachments between radial lines sections	Total number of kilometers of attachments between radial line sections installed with MCC funding and receiving provisional acceptance from MCA Senegal II	No material changes.
Energy efficiency messages are delivered	Communication on energy efficiency	People reached by information and education campaign (energy efficiency)	TBD	Number of energy efficiency messages	Total number of messages delivered on energy efficiency	It is expected to be easier to obtain data for the M&E Plan's indicator compared to the Compact's. Knowing the number of people reached can be difficult depending on the communication medium.
Messages on understanding electricity bills are delivered	Communication on energy consumption and billing	People reached by information and education campaign (energy consumption)	TBD	Number of messages on energy consumption and its billing	Total number of messages broadcast at national level on energy consumption and its billing	It is expected to be easier to obtain data for the M&E Plan's indicator compared to Compact's. Knowing the number of people reached can be difficult depending on the communication medium.
Messages on the electricity connection	Communications on the network connection process	People reached by information and education campaign	TBD	Number of messages on the connection process to the Senelec RI network	Total number of messages broadcast on the process of connecting to the Senelec RI network in the areas in	Same above

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact indicator definition	M&E plan indicator	M&E Plan Indicator definition	Reason for change
process delivered					MCC's areas of intervention	
-	Communications on productive uses of electricity	-	-	Number of messages on the productive uses of electricity in MCC intervention areas.	The total number of messages broadcast on the productive uses of electricity in MCC's areas of intervention.	Indicators are added to reflect the new result. This result was included in the Compact logic diagram, but not in its indicator table.
				Number of entities benefiting from accompaniment activities and support for productive uses	Total number of entities benefiting from MCC-funded activities to develop the productive uses of electricity	
Capacity development for stakeholders	Capacity building of stakeholders in communications (regional level)	Individuals participating in capacity development activities	Number of individuals attending at least one full day (or 8 hours) of a capacity development activity (training, workshop, or other)	Number of stakeholders strengthened in communication	Total number of stakeholders that have benefited from capacity building in communication with ACM support	The new result and indicator focus on communications, which is better aligned with the planned Activity.
Technical assistance provided to Senelec Regional Offices	Technical assistance provided to Senelec's regional offices and concessionaires	Individuals receiving technical assistance	Number of Senelec personnel receiving at least 20 hours of technical assistance	Number of times technical assistance is provided to Senelec regional offices and concessionaires	The number of times technical assistance is provided to Senelec regional offices and concessionaires in terms of capacity building and/or support missions	This activity targets Senelec as well as **concessionaires**
Senelec has an operational inventory management system	Inventory management system	Inventory management system established	TBD	Date of establishment of the inventory management system	Date of the establishment of the inventory management system	No material changes to this indicator
Assessment of Senelec Customer Service Directorate	Customer service evaluation is done	Date at which the Senelec customer service assessment is completed	The date at which MCA-Senegal II, MCC, and Senelec accept the final version of the consultant's assessment report	Customer Service Evaluation Date	Date on which the customer service assessment is completed	No material changes to this indicator
Assessment of	Inventory of electricians	Date at which the electrical technician assessment is	The date at which MCA-Senegal II, MCC, and Senelec	Date of completion of the inventory of electricians	The date at which MCA-Senegal II, MCC, and Senelec	No material changes to this indicator.

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact indicator definition	M&E plan indicator	M&E Plan Indicator definition	Reason for change
electrical technicians capable of installing interior wiring and/or ready boards conducted	qualified to do interior wiring	completed	accept the final version of the consultant's assessment report	qualified to make the inside wire	accept the final version of the consultant's assessment report	Indicator or definition will be revised with the M&E Plan revision.
Electrical technicians Trained	Trained electricians	Trainings completed	Number of training modules completed at least 80%. If one individual completes five trainings, this would be counted as five trainings completed.	Number of electricians trained	This is the total number of electricians trained with MCC support	No material changes to this indicator
Assessment of service providers able to do feasibility/ design needed for customers >35/45m from grid	Inventory of service providers able to conduct a study for connecting households beyond 35 meters of the network	Date at which the electrical technician assessment is completed	The date at which MCA-Senegal II, MCC, and Senelec accept the final version of the consultant's assessment report	Date of realization of the state of the service providers able to make the study to connect households beyond 35 meters of the network	Date on which the inventory of service providers capable of doing the study to connect households beyond 35 meters of the network was carried out	No material changes to this indicator
Technical assistance to equipment suppliers provided	Technical assistance to equipment suppliers	Individuals receiving technical assistance	Number of personnel of equipment suppliers receiving at least 20 hours of technical assistance	Number of times technical assistance is provided to equipment suppliers	Total of times technical assistance is provided to equipment suppliers with MCC support	No material changes to this indicator
Technical assistance for financial institutions	Technical assistance to financial institutions	Individuals receiving technical assistance	Number of personnel of financial institutions receiving at least 20 hours of technical assistance	Number of times technical assistance is provided to financial institutions	Total number of times technical assistance is provided to financial institutions with MCC support	No material changes to this indicator

Reform Project

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact definition indicator	M&E plan indicator	M&E plan definition indicator	Reason for change
Outcome Indicators						
Increased and sustained value of electricity delivered to consumers	*Improved Customer Satisfaction*	(P-14) Cost reflective Tariff regime	Average tariff per kilowatt-hour / Long-run marginal cost per kilowatt-hour of electricity supplied to customers	*Customer satisfaction index**	Percentage of survey respondents stating that they are satisfied or very satisfied with the quality of electricity they receive from their service provider	This goal-level result does not have an indicator in the M&E plan. However, the M&E plan has introduced a result on customer satisfaction, which will be measured over the course of the Compact. It will indicate the "value" that is delivered to customers.
Improved financial viability of electricity sector	Improved financial viability of operators OBJECTIVE-LEVEL	Quasi-fiscal deficit	Net revenue of an efficient utility minus cash collected by the utility in a year. See Trimble et al (2016) for full definition	-		Quasi-fiscal deficit has been replaced with other financial performance indicators that utilities routinely collect.
		Maximum Revenue Allowed (RMA)	See CRSE's RMA formula in publically available documents	Required revenue *	Maximum Authorized Revenue	This indicator is in the M&E plan as "income required". No meaningful change in indicator.
		-	-	Net return on equity*	The profitability of the company (Senelec and concessionaires), translated in terms of net income, relative to its equity. It is calculated by the following formula: Net Profit / Equity.	Indicator is added to complete financial viability indicator
		(P-24) Operating cost recovery ratio	Total revenue collected (of Senelec and IPPs) / Total operating cost (of Senelec and IPPs). Total operating cost is defined as operating expenses plus depreciation.	(P-24) Operating cost recovery ratio	Total revenue collected / Total operating cost. Total operating cost is defined as operating expenses plus depreciation.	No change to indicator

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact definition indicator	M&E plan indicator	M&E plan definition indicator	Reason for change
		Operating cash flow ratio	Cash flow from operations / current liabilities of the utility	Operating cash flow ratio *	The operator's ability to meet its short-term commitments. It is calculated by the following formula: Cash flow from operations (of Senelec and Concessionaires) / current liabilities of the utility (of Senelec and Concessionaires)	
Increased induced demand	Increase in induced demand	Electricity demand met	Electricity generated in Senegal + Electricity imported to Senegal – Non-distributed Energy	Rate of access to electricity	The population with effective access to electricity divided by the total population of the area.	The result and indicator are modified knowing that the demand induced by the project will be difficult to assess but will nevertheless contribute to improving the access rate.
Increased consumer Surplus*	-	Consumer surplus for quality electricity service	Non-weighted average of the willingness to pay in FCFA for one kWh of electricity of households and firms with and without electricity connections minus the cost-reflective tariff	-	-	The result is deleted but M&E will explore whether it is feasible for it to be measured by the independent evaluation. M&E also plans to measure the related concept of customer satisfaction.
Quality of supply meets demand	Increased reliability of electricity supply	Non-distributed energy	Estimate of how much electricity would have been distributed had there not been a service interruption caused by lack of generation, incidents, load shedding by HV customers, maintenance works, overloaded transformers or lines, and load shedding due to LV.	Total non-distributed energy on the network	Estimation of all non-distributed energy from service interruptions	No change to indicator
				Distribution system losses	1 – [Total megawatt hours billed / Total megawatt hours received from transmission]	Indicator is introduced for an additional measure of quality
Increased number of households and firms connected to the grid	-	(P-25) Percentage of households connected to the national grid	Number of households that have access to a legal connection to electricity service from an	-	-	This result is mainly due Access Project. Indicator are included in Access Project

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact definition indicator	M&E plan indicator	M&E plan definition indicator	Reason for change
			electrical utility or service provider / Total number of households in the country.			
Lowered contracted power pricing	Lowered contracted power pricing	Power price in Power Purchase Agreements	Sum of average price per kWh as determined in each PPA in effect divided by total number of PPAs in effect. The average price per kWh equals the price per kWh if the PPA has a flat rate. If the price varies over time, the average is computed based on the current year.	kWh price in Power Purchase Agreements	Sum of the average price per kWh determined in each PPA in force divided by Total Number of PPA in force. The average price per kWh is equal to the price per kWh if the PPA has a fixed rate. If the price varies over time, the average is calculated based on the current year.	No material change
More private sector participation in large procurements	-	Average number of companies competing on large procurements	Number of companies submitting bids for electricity sector procurements (>$1 million) divided by number of procurements that are >$1 million. Companies submitting bids on multiple procurements are counted multiple times.	-	-	Assessing private sector participation in generation (indicator below) is sufficient for this result
	More private sector participation in all segments KEY TARGETED RESULT	Private sector participation in electricity generation	Percentage of privately-owned installed generating capacity as percentage of all installed capacity in Senegal	Private sector participation in electricity generation	Electricity generation from privately-owned generation assets in one year divided by total generation	No change to indicator
	Increased private sector participation in rural electrification		Electricity generation from privately-owned generation assets in one year	Number of private firms in rural electrification*	Total number of private firms in rural electrification	No change to indicator

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact definition indicator	M&E plan indicator	M&E plan definition indicator	Reason for change
Optimized dispatching	Optimized dispatching	Share of least cost generation sources in total energy transmitted	Quantity of energy dispatched from the 50% least expensive generation units in a quarter / Total quantity of energy dispatched in a quarter	Least-cost generation*	Quantity of energy dispatched from the 10% least expensive generation units in a quarter / Total quantity of energy dispatched in a quarter	No material changes. The M&E plan focuses on the cheapest 10% which allows us to observe more meaningful change as compared to the 50%.
Increased access facilitated for third parties	Third-party network access in effect	Number of third parties accessing network	Number of third-party access contracts fully executed per ECOWAS directives in a year	Third-party network access contracts*	The sum of network access contracts between third-party suppliers and the transmission system operator	The term “increased” is not appropriate since third-party network access is an innovation.
Long Term Strategy and Legal Framework in Effect	-	TBD	TBD	-	-	This result is replaced with more specific results related to the adoption of the electricity code and its implementing decrees, as well as the result on “Integrated investment planning”.
Improved and focused management for functional entities	Improved and focused management for functional entities	TBD	TBD	Overall performance*	It is a measure of the sustainability of the companies (Senelec and concessionaire), translated in terms of reported net income to its products. It is calculated by the following formula: Net income / Total general products	This indicator replaces a TBD in the M&E plan.
Increased transparency of	Increased transparency of	TBD	TBD	Cost transparency index*	Percentage of survey respondents stating that	This indicator replaces a TBD in the M&E plan.

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact definition indicator	M&E plan indicator	M&E plan definition indicator	Reason for change
costs for functional entities	functional entities' costs				functional entities' costs are transparent or very transparent	
Sustainable required revenue levels allowed to licensees	Adjusted cost of service	Adjusted cost of service	Required revenue	Income required *	Maximum Authorized Revenue	This result is deleted to retain 'adjusted cost of service" which is more appropriate. This change in result statement does not substantively alter the meaning of the result.
Increased timeliness of government payment for (collection of) accounts receivable	GoS compensation paid to Senelec in full and on time KEY TARGETED RESULT	Time for the Government to make payments to Senelec	TBD	GoS compensation timeliness	Number of days between CRSE's determination of the tariff ("gel du tarif") and the date when Senelec receives the Government compensation payments, including value-added tax (TVA)	This indicator replaces a TBD in the M&E plan.
Increased cash flow to utility	-	Utility's cash flow	Net amount of cash and cash-equivalent transferred into and out of Senelec in a quarter	Operating cash flow ratio	The operator's ability to meet its short-term commitments. It is calculated by the following formula: Cash flow from operations (of Senelec and Concessionaires) / current liabilities of the utility (of Senelec and Concessionaires)	This indicator was replaced with "Operating cash flow ratio", which is a commonly accepted financial indicator. It is linked to the results: "Improved financial viability of operators" and "Improved cost-recovery and sustainable cash flow of electricity sector companies"
Increased value from Investments	Increased in investments	TBD	TBD	Sector investment*	Total amount of investment	Indicator replaces a 'TBD' in Compact Annex III. There is no material change to the result statement.

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact definition indicator	M&E plan indicator	M&E plan definition indicator	Reason for change
Increase in planned funds to address sector needs	Increase in planned funds to address sector needs	TBD	TBD	Planned funds to sector*	Amount of planned funds to sector in a year	Indicator replaces a 'TBD' in Compact Annex III.
Improved planning	Improved sector investment planning KEY TARGETED RESULT	TBD	TBD	Integrated Investment Planning Practices*	The average of scores in the "integrated investment planning assessment framework"	The new result statement is more specific but does not constitute a material change. The indicator replaces a 'TBD' in Compact Annex III.
Higher quality partners and services procured	-	TBD	TBD	-	-	This result is related to electrification plans which is a part of the "Integrated Investment Planning Practices*" index.
Funding needs better identified for realistic access rural electrification plans*	-	TBD	TBD	-	-	This result is related to electrification plans which is a part of the "Integrated Investment Planning Practices*" index.
Financial viability of rural on-grid and off-grid operators increased	Improved financial viability of operators OBJECTIVE-LEVEL	Cost-recovery ratio of rural on-grid and off-grid operators	Total revenue collected by all licensed rural electricity companies involved in rural retail /Total operating cost of those companies. Total operating cost is defined as operating expenses plus depreciation.	Operating cost recovery Ratio	Total revenue collected / Total operating cost. Total operating cost is defined as operating expenses plus depreciation.	There is no material change to this indicator. Its definition includes Senelec and rural concessionaires.
Capable private sector operators for rural distribution procured	-	TBD	TBD	-	-	Result will not be measured since it is related to private participation in distribution which is planned as part of the affermage (2028) that will take place beyond the evaluation period.

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact definition indicator	M&E plan indicator	M&E plan definition indicator	Reason for change
Reduced burden on public finances	Reduced burden on public finances	TBD	TBD	Number of sovereign guarantees	Annual statement of sovereign guarantees signed by the State for Senelec	This indicator replaces a 'TBD' in Compact Annex III. It is directly related to the result.
Reduced burden on public finances	Reduced burden on public finances	TBD	TBD	Average volume sovereign guarantees	Amount Annual sovereign guarantees signed by the State for Senelec / Total Number of sovereign guarantees in the year	This indicator replaces a 'TBD' in Compact Annex III. It is directly related to the result.
Sustainable required revenue levels allowed to licensees	-	TBD	TBD	-	-	This result is deleted because it is not meaningfully different than the "Adjusted cost of service" result
Increased protection of consumer rights with respect to the price, supply and quality of electrical energy*	-	TBD	TBD	-	-	This Annex III result is multi-faceted. It has been replaced with more specific results related to regulatory governance and substance, including "Regulator fulfills its mandate" and "Regulatory governance index"
Increased promotion of the rational development of the supply of electricity*	-	TBD	TBD	-	-	This result was replaced with more measurable ones such as "regulatory governance improved", which is measured through the regulatory governance index.
Tariff Plan Developed and Adopted	Tariff Plan Developed and Adopted	(P-14) Cost reflective tariff regime	Average tariff per kilowatt-hour / Long-run marginal cost per kilowatt-hour of electricity supplied to customers.	Tariff plan adoption	Date at which the tariff plan is developed and adopted	"(P-14) Cost reflective tariff regime" is related to "Improved economic viability of the power sector". Otherwise, the indictor is date due

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact definition indicator	M&E plan indicator	M&E plan definition indicator	Reason for change
Sector Stakeholders Engaged and Sensitized on Updated Regulations and Policy	Sector Stakeholders Engaged and Sensitized on Updated Regulations and Policy	Sector stakeholder understanding of new sector policies and regulations	Percentage of sector stakeholders who respond correctly to at least 75% of survey questions on new regulations and policies	Sector stakeholder understanding of new sector policies and regulations	Percentage of sector stakeholders who respond correctly to at least 75% of survey questions on new regulations and policies	No change to indicator
Tariff Methodology Decision(s) Transmitted	Tariff Plan Developed and Adopted	Adoption of tariff plan	Date at which the tariff plan is developed and adopted	Tariff plan adoption	Date at which the tariff plan is developed and adopted	No material change
Integrated Investment Planning Framework Decision(s) by Regulator Transmitted	Integrated Investment Plan Framework Adopted	Adoption of integrated investment planning framework	Date at which integrated investment plan framework and related processes adopted by regulatory decision	Adoption of an integrated investment plan framework	Date the integrated investment plan framework is adopted and approved by the Ministry.	No material change
IPP Procurement Framework Decision(s) by Regulator Transmitted	IPP/PSP Procurement Framework Developed	IPP Procurement Framework Decision(s) by Regulator Transmitted	Date at which IPP Procurement Framework Decision(s) by Regulator Transmitted	IPP solicitation framework	Date at which the IPP/PSP procurement framework is formally validated by the Government of Senegal	No material change
Third Party Access Contracts and Documents Drafted	Third Party Access Contracts and Documents Drafted	Third Party Access Contracts and Documents Drafted	Date at which Third Party Access Contracts and Documents Drafted	Third Party Access Contracts and Documents Drafted	Date at which Third Party Access Contracts and Documents Drafted	No change to indicator

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact definition indicator	M&E plan indicator	M&E plan definition indicator	Reason for change
New TSO Interface Contracts and Specific Pricing Developed	Transmission System Operator (TSO) Created and Operationalized	New TSO Interface Contracts and Specific Pricing Developed	Date at which new TSO Interface Contracts and Specific Pricing Developed	TSO Operational	Date at which the TSO has an allocated budget	No material change
Regulations and policy incentivize operational efficiency	-	TBD	TBD	Regulatory substance index	TBD	This result is in the Compact Annex III indicator table, but not in the logic diagram. In the M&E plan, it is reflected in the “regulatory substance improved” result.
Regulations and policy incentivize capital efficiency	-	TBD	TBD	Regulatory substance index	TBD	This result is in the Compact Annex III indicator table, but not in the logic diagram. In the M&E plan, it is reflected in the “regulatory substance improved” result.
Regulations and policy incentivize private sector participation	-	TBD	TBD	Regulatory substance index	TBD	This result is in the Compact Annex III indicator table, but not in the logic diagram. In the M&E plan, it is reflected in the “regulatory substance improved” result.
Regulations and policy incentivize operational performance	-	TBD	TBD	Regulatory substance index	TBD	This result is in the Compact Annex III indicator table, but not in the logic diagram. In the M&E plan, it is reflected in the “regulatory substance improved” result.

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact definition indicator	M&E plan indicator	M&E plan definition indicator	Reason for change
Sustainable required revenue levels allow sufficient cash flow	Adjusted cost of service	TBD	TBD	Required revenue	Maximum Authorized Revenue	This result is in the Compact Annex III indicator table, but not in the logic diagram. In the M&E plan, it is results on “adjusted cost of service”
	Improved financial viability of operators			Operating cash flow ratio	The operator's ability to meet its short-term commitments. It is calculated by the following formula: Cash flow from operations (of Senelec and Concessionaires) / current liabilities of the utility (of Senelec and Concessionaires)	This result is in the Compact Annex III indicator table, but not in the logic diagram. In the M&E plan, it is results on “Improved financial viability of operators
New applied tariff allows for sustainable funding of revenue	Adjusted cost of service	TBD	TBD	Required revenue	Maximum Authorized Revenue	This result is in the Compact Annex III indicator table, but not in the logic diagram. In the M&E plan, it is results on “adjusted cost of service”
	Improved financial viability of operators			Operating cash flow ratio	The operator's ability to meet its short-term commitments. It is calculated by the following formula: Cash flow from operations (of Senelec and Concessionaires) / current liabilities of the utility (of Senelec	This result is in the Compact Annex III indicator table, but not in the logic diagram. In the M&E plan, it is results on “Improved financial viability of operators

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact definition indicator	M&E plan indicator	M&E plan definition indicator	Reason for change
					and Concessionaires)	
Regulations and policy incentivize new connections	-	TBD	TBD	-Required revenue - Operating cash flow ratio		This result is in the Compact Annex III indicator table, but not in the logic diagram. In the M&E plan, it is results on "adjusted cost of service" and "Improved financial viability of operators"
Regulations and policy incentivize demand efficiency	-	TBD	TBD	-Required revenue - Operating cash flow ratio		This result is in the Compact Annex III indicator table, but not in the logic diagram. In the M&E plan, it is results on "adjusted cost of service" and "Improved financial viability of operators"
Improved continuity of service	Increased reliability of electricity supply	(P-21) System Average Interruption Duration Index (SAIDI)	Sum of durations, in custome hours, of all customer interruptions in a quarter / Total number of customers connected to network in the same quarter.	Total non-distributed energy on the network	Estimation of all non-distributed energy from service interruptions	The Compact and M&E plan indicators are not significantly different. The M&E plan indicator is already accessible from Senelec for the entire network. The Transmission Project includes alternate indicators to assess electricity service quality.
		(P-22) System Average Interruption Frequency Index (SAIFI)	Sum of customer-interruptions in a quarter / Total number of customers connected to network in the same quarter.	Distribution system losses	1 – [Total megawatt hours billed / Total megawatt hours received from transmission]	

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact definition indicator	M&E plan indicator	M&E plan definition indicator	Reason for change
Reduced commercial losses	Improved utility performance on select KPIs	(P-20) Commercial losses	Total distribution system losses minus distribution technical losses	TBD	TBD	The result has changed to reflect uncertainty in the definition of Senelec KPIs under the utility incentive program. An indicator will be defined when those KPIs are determined.
Reduced transmission-level technical losses	Reduced technical losses due to poorly maintained network	(P-18) Transmission system technical losses	1- [Total megawatt hours transmitted out from transmission substations / Total megawatt hours received from generation to transmission substations]	Technical losses due to poorly maintained network	TBD	This result is in the Compact Annex III indicator table, but not in the logic diagram. The M&E plan result and indicator are more clearly linked to the network management sub-activity. The indicator definition is still TBD.
Improved competencies of Senelec personnel (DTAE, DAPA, DSI, DFC, DAICG, CFPP)	The staff of the future transmission system operator is trained and equipped	TBD	TBD	Number of employees trained in the computerized maintenance management system (CMMS)	The sum of Senelec employees who attended at least one training on the CMMS	The result and indicator are revised to more accurately reflect the training that the project is currently planning.
Improved maintenance practices through use of unmanned aerial vehicle (UAV)	Improved planning of maintenance and transmission network expansion	TBD	TBD	Number of malfunctions on HTA lines per 100 km of HTA lines	Number of malfunctions on HTA lines per 100 km of HTA lines	This result is neither in the logic diagram of the Compact nor in that of the M&E plan. The M&E plan introduces a result related to maintenance practices and adopts this indicator, which Senelec currently reports on.
Improved capacity of Senelec to asset management,	Improved management of network assets	TBD	TBD	P13 Maintenance expenditure-asset value ratio	Actual maintenance expenditures / Total	This indicator was included in the Compact for the result on “improved maintenance”. There is also a result on staff

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact definition indicator	M&E plan indicator	M&E plan definition indicator	Reason for change
accounting, and financial management	KEY TARGETED RESULT				value of fixed assets.	being trained and equipped. See above.
	Increased capacity in financial management	TBD	TBD	Senelec skills of staff in financial management*	The indicator is estimated by the proportion (%) of Senelec staff members who have very good or good competency in financial management skills	Indicator added to replace TBD in Compact.
-	Reduced cost of service	-	-	Average Cost per kWh	The cost of the kWh weighted average of the energy transmitted across the interconnected network	These results are expected from Reform Project. They are not in the logic Compact
-	GoS obligations to Senelec decreased	TBD	TBD	GoS obligations to Senelec	The outstanding balance of amounts due to Senelec for electricity bills and compensation in accordance with the Sector Repayment Plan and Tariff Plan	The M&E plan added this result and indicator, which are closely linked to the "reduced burden on public finances" result included above.
Lower contracted power pricing	Reduced cost of electricity for eligible clients	Power price in Power Purchase Agreements	Sum of average price per kWh as determined in each PPA in effect divided by total number of PPAs in effect. The average price per kWh equals the price per kWh if the PPA has a flat rate.	Power price in third-party access purchase agreements*	Percentage difference between the average kWh price the buyers of the purchase agreements (TSO or other clients) paid	The M&E plan includes this indicator to differentiate prices in PPAs in general and those in the third-party access agreements specifically.

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact definition indicator	M&E plan indicator	M&E plan definition indicator	Reason for change
			If the price varies over time, the average is computed based on the current year.		prior to third-party network access and the average price per kWh in all active third-party access power purchase agreements.	
-	Increased capacity in business plan development, environmental compliance, and the roll-out of single-phase technology and smart metering to support tariff harmonization	-	-	Numbers of business plan developed	Number of business plans developed with the assistance of MCC	This result was added to the project logic in the M&E plan to reflect the project description included in Compact Annex I, but that was not in Annex III.
Guichet Unique Operationalized	Increased number of approved projects	Guichet Unique Operationalized	Date at which the Guichet Unique is staffed at least 75% and has a budget to operate	Number of approved projects*	Total of number of approved projects in a year	This result reflects the effectiveness of the guichet unique. M&E considered this a more direct approach to measuring the result.
-	Increased cash flow for public rural investments	-	-	Cash flow for public rural investments*	Total amount of public investment for rural electrification	This result was added to reflect what is expected following the reduced burden on public finances.
-	Regulatory governance Improved KEY TARGETED RESULT	-	-	Regulatory governance index	TBD	The M&E plan include this index to capture many of the qualitative concepts that are a part of regulatory governance.

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact definition indicator	M&E plan indicator	M&E plan definition indicator	Reason for change
-	Regulatory powers expanded	-	-	Regulator law and electricity code adopted	Date at which the electricity code and regulator law are adopted	M&E introduced this index to capture the project's efforts to strengthen the regulator's role in integrated investment planning, hydrocarbon sub-sector, power purchase agreements, and tariff determination.
				Regulatory power index*	It is a composite measure related to the expanded authorities of the regulator in the areas of integrated investment planning, hydrocarbon sub-sector, power purchase agreements, and tariff determination.	
-	Regulator's independence strengthened	-	-	Electricity regulatory index (Independence)*	The AfDB ERI defines independence as "Institutional, financial and operational autonomy amongst political authorities, stakeholders and regulators". It is calculated from four sub-indicators: independence from the powers of the executive and legislative, independent from the stakeholders and market participants, decisional independence, and financial and	This indicator was introduced to reflect a key feature of regulatory strengthening.

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact definition indicator	M&E plan indicator	M&E plan definition indicator	Reason for change
					budgetary independence.	
-	Credibility, transparency, and predictability of regulator regulator's decisions improved	-	-	Transparency and predictability of decisions	The average of the indicator scores for "transparency of decisions" and "predictability" included in the African Development Bank's Electricity Regulatory Index (ERI). The sub-indicators and methodological details are in the ERI report.	This indicator was introduced to reflect a key feature of regulatory strengthening.
-	Regulator's human, technical, and financial capacity increased	-	-	TBD	TBD	Result added as part of more detailed project logics developed by the Reform Project team.
-	Improved understanding of regulation's purpose and objectives	-	-	Customer and sector actors understanding of regulation's purpose and objectives*	Percentage of survey respondents stating that they are good or very good understanding of regulation's purpose and objectives	Result added as part of more detailed project logics developed by the Reform Project team.
-	Improved understanding of regulatory decisions	-	-	Customer understanding of regulation decisions*	Percentage of survey respondents stating that they are good or very good understanding regulatory decisions	Result added as part of more detailed project logics developed by the Reform Project team.

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact definition indicator	M&E plan indicator	M&E plan definition indicator	Reason for change
-	Regulatory substance improved KEY TARGETED RESULT	-	-	Regulatory Substance Index*	TBD	Result added to summarize other results related to regulatory substance.
-	Improved quality of data available to CRSE to measure performance	-	-	Quality data provided by the operators to CRSE*	Percentage of CRSE technical staff who state that the quality of data they receive from operators is good or very good.	Result added as part of more detailed project logics developed by the Reform Project team.
-	Improved cost control and financial projections	-	-	Budget execution rate	[The sum of expenditures / The sum of projected expenditures] x 100.	Result added as part of more detailed project logics developed by the Reform Project team.
-	Drivers of weak performance identified	-	-	Date of identification of poor performance drivers	Date at which the consultant report on poor performance is accepted	Result added as part of more detailed project logics developed by the Reform Project team. This result is included in the evaluation section of Compact Annex III and M&E plan.
-	Resolutions to weak performance proposed to Utility Director General	-	-	Transmission date of poor performance recommendations to the Senelec Director General	Date at which the recommendations are transmitted to the Senelec Director General	Result added as part of more detailed project logics developed by the Reform Project team.
-		-	-	Efficient GIS	TBD	This result was added to summarize the outcome of the planned upgrade to the

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact definition indicator	M&E plan indicator	M&E plan definition indicator	Reason for change
	Improved GIS capability KEY TARGETED RESULT					geospatial information system database
				Optimal management of GIS database	TBD	This result was added to summarize the outcome of the planned upgrade to the geospatial information system database
-	Optimizing regional integration of the TX network	-	-	Amount of energy imported or exported	The total Megawatt hours of electricity imported or exported	This result was added to reflect an additional outcome of a stable network, which is consistent with the project logic but had not been considered during the time of Compact development and signature.
	Reduced application processing times	-	-	Application processing time*	Number of days between the receipt and processing of requests submitted to the “one-stop shop”	This result was included in the M&E plan’s sub-activity logics.
	Improved economic viability of the power sector KEY TARGETED RESULT	-	-	Cost-reflective tariff regime	Average tariff per kilowatt-hour / Long-run marginal cost per kilowatt-hour of electricity supplied to customers.	This outcome reflects the team’s new definition of the Project Objective.
Output Indicators						

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact definition indicator	M&E plan indicator	M&E plan definition indicator	Reason for change
Financial Viability Analyses Recommendations Transmitted and Adopted	-	Government adoption of financial viability analyses recommendations	Date at which the financial viability analyses or formally adopted by the Government of Senegal	-	NA	This process result was completed before the Compact's entry into force. It is included in the M&E plan's sub-activity logics, but not in the indicator table.
Operational and financial restructuring of SENELEC	Senelec's functional unbundling completed	Senelec restructuring	Date at which Senelec is unbundled into public subsidiary under a public holding company	Date of preparation of the financial statements by the various subsidiaries	Date at which the first financial statements of the subsidiaries are prepared	Since the financial separation is planned before the functional separation, the result is split into two indicators
				Date of completion of the unbundling	Date at which the legal acts allowing utility unbundling with the public subsidiaries being under of a holding company	
Roadmap and Action Plan Adopted	-	Roadmap and Action Plan Adopted	Date at which the roadmap and action plan are formally adopted by the Government of Senegal	-	NA	This process result was completed before the Compact's entry into force. It is included in the M&E plan's sub-activity logics, but not in the indicator table.
Electricity Code Enacted	Electricity code and decrees adopted	Electricity Code Enacted	Date at which the electricity code is formally adopted by the Government of Senegal	Date of promulgation of the Electricity Code	Date decree on the electrical code is published in the official journal	There is no material change to this indicator.
Transmission System Operator (TSO) Created and Operationalized	Transmission System Operator (TSO) Created and Operationalized	TSO Operational	Date at which the TSO is staffed at least 75% and has an allocated budget	TSO Operational	Date at which the TSO has an allocated budget	Indicator definition changed, but not in materially.
Regulatory and legal framework and implementing decrees are validated	Electricity code and decrees adopted	Regulatory and legal framework and implementing decrees validated	Regulatory and legal framework supporting the 2035 vision (including electricity code) and implementing decrees are validated	Date of promulgation of the Electricity Code	Date decree on the electrical code is published in the official journal	"Electricity code and decrees adopted" is related to "regulatory and legal framework and implementing decrees validation"
	Application texts adopted			Date of adoption of application texts	Date decree on application texts is published in the official journal	
Affermage Transition Plan Developed	Affermage Transition Plan Developed	Plan to support transition from concessionaires to affermages	Date at which Affermage Transition Plan is developed and adopted	Affermage Transition Plan	Date at which affermage transition plan developed and adopted	There is no material change to this indicator.

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact definition indicator	M&E plan indicator	M&E plan definition indicator	Reason for change
		developed and adopted				
Training and Support Program for ASER Completed	Training and Support Program for ASER Completed	Training and Capacity development support provided	Number of ASER staff participating in a full training course or module funded by MCC	Number of people trained in preparation of business plans	Number of ASER workers, rural operator, specifically operator of off grid trained in developing business plans with the assistance of MCC	The indicator name and definition are changed to specifically refer to the nature of the training.
Customs/VAT Exemption Provisions Approved	-	Ministry of Economy, Finance and Planning approves customs and VAT exemptions	Date at which the Ministry of Economy, Finance and Planning approves customs and VAT exemptions for off-grid asset/equipment sales deemed satisfactory by MCA Senegal II, MCC, and the relevant implementing entities and consultants	-	NA	The Reform Project no longer expects to cover customs/VAT exemption.
MPE Capacity Building Plan for Integrated Planning Developed	MPE Capacity Building Plan for Integrated Planning Developed	MPE Capacity Building Plan developed	Date at which the MPE Capacity Building Plan receives formal acceptance from MCC, MCA, Senegal II and MPE	MPE capacity building plan for integrated planning developed	Date at which the MPE Capacity Building Plan receives formal acceptance from MCC, MCA, Senegal II and MPE	An indicator is added
				MPE staff trained in integrated planning	Number of MPE's people trained in developing Integrated Planning with the assistance of MCC	
Integrated Investment Plan Framework Adopted	Adoption of an integrated investment plan framework	Integrated sector investment planning framework	Date at which the integrated sector investment planning framework is formally adopted by the Government of Senegal	Adoption of an integrated investment plan framework	Date the integrated investment plan framework is adopted and approved by the Ministry	There is no material change to this indicator.
Integrated Sector Planning Process	-	Integrated Sector Planning Process (Annual)	Date(s) at which sector planning assessment report is completed	-	NA	Taking account indicator definition, this result is not applicable since before there

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact definition indicator	M&E plan indicator	M&E plan definition indicator	Reason for change
(Annual) Completed		Completed				are not an integrated investment plan
Guichet Unique Operationalized	One-stop-shop ("Guichet Unique") established	Guichet Unique Operationalized	Date at which the Guichet Unique is staffed at least 75% and has a budget to operate	One-stop-shop established	The date at which an online guichet unique, serving as a "one-stop shop", for existing and new private companies seeking to invest in the sector is functional	The result and indicator change from "operationalized" to "established", because this an output-level result. The outcome-level result is "Increased number of approved projects" included further above.
IPP/PSP Procurement Framework Developed	IPP/PSP Procurement Framework Developed	IPP/PSP Procurement Framework Developed	Date at which the IPP/PSP Procurement Framework is formally validated by the Government of Senegal	IPP solicitation framework	Date at which the IPP/PSP procurement framework is formally validated by the Government of Senegal	There is no material change to this indicator.
Ancillary Services Recommendations and Plan Adopted	Ancillary Services Recommendations and Plan Adopted	Ancillary Services Recommendations and Plan Adopted	Date at which the Ancillary Services Recommendations and Plan is formally adopted by the Government of Senegal	Ancillary services plan	Date at which the ancillary services recommendations and plan is formally adopted by the Government of Senegal	There is no material change to this indicator.
Market Opening Transition Plan Developed	Market Opening Transition Plan Developed	Market Opening Transition Plan Developed	Date at which the Market Opening Transition Plan is formally adopted by the Government of Senegal	Market Opening Transition Plan	Dates on which the market opening transition plan is developed	There is no material change to this indicator.
Tariff Reform Study Completed	Tariff reform study completed	Tariff Reform Study Completed	Date at which Tariff Reform Study is formally accepted by MCA Senegal II	Tariff study completion	Date at which all deliverables from the Cost of Service and Tariff Methodology Study are accepted by MCA Senegal II	There is no material change to this indicator.
Regulations Supporting Cost, Quality, and Access Goals Reinforced and Developed	-	TBD	TBD	-	NA	This result is neither in the logic diagram of the Compact nor in that of the M&E plan

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact definition indicator	M&E plan indicator	M&E plan definition indicator	Reason for change
New organizational structured for CRSE Developed and Approved	New organizational structured for CRSE Developed and Approved	New organizational framework for CRSE	Date at which CRSE adopts a new organizational framework in line with its strategic objectives developed with MCC assistance	New organizational framework for CRSE	Date at which CRSE adopts a new organizational framework in line with its strategic objectives developed with MCC assistance	There is no material change to this indicator.
CRSE career development plan completed	CRSE career development plan developed	CRSE staff development plan completed	Date at which CRSE adopts a staff development plan developed with MCC assistance	CRSE staff development plan completed	Date at which CRSE adopts a staff development plan developed with MCC assistance	There is no material change to this indicator.
New Salary Recommendations Proposed and Made Policy	New Salary Recommendations Proposed and Made Policy	Adoption of new salary structure	Date at which CRSE formally adopts new salary structure developed with MCC assistance	Salary study	Date at which a study comparing CRSE staff salaries with individuals in similar sectors and competencies is completed and accepted by MCA Senegal II	The revised indicator focuses on the issuance of recommendations rather than their implementation.
Training provided	-	Number of CRSE staff trained	Number of CRSE staff participating in a full training course or module funded by MCC	-	NA	These Compact Annex III indicators were not included in the M&E plan but will be incorporated in future revisions. There is training planned in some activities such as the grid audit.
Technical assistance provided	-	Technical assistance provided	Number of individuals benefiting from at least 40 hours of technical assistance	NA	NA	These Compact Annex III indicators were not included in the M&E plan, but will be incorporated in future revisions
New Recruits Hired	New recruits hired	Number of new technical staff members hired	Number of new technical staff members hired by CRSE with MCC technical and financial assistance	New CRSE staff hired	Total number of new recruitments	There is no material change to this indicator.
Financial Autonomy Plan Adopted	Financial autonomy study completed	Financial Autonomy Plan Adopted	Date at which Financial Autonomy Plan Adopted by Parliament and the MPE	Financial autonomy study	Date at which the financial autonomy study is accepted by MCA Senegal II	Financial autonomy plan adoption will be included, if relevant, to M&E Plan revision.

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact definition indicator	M&E plan indicator	M&E plan definition indicator	Reason for change
Communications Plan Implemented	CRSE communications plan developed	Communications Plan Implemented	Date at which CRSE communications staff are actively working on tasks directly related to the communications plan	CRSE communications Plan	Date at which CRSE formally adopts the communication plan prepared with MCC support	- Implemented communication Plan will be included in M&E Plan revision
Grid Audit and Licensee Conformity Assessment Completed	Grid audit completed	TBD	Date at which Grid Audit Completed	Date of completion of grid audit	Date at which the grid audit study is completed	There is no material change to this indicator.
Regulatory Enforcement Organizational Development and Empowerment Strategy Developed		Regulatory Enforcement Organizational Development and Empowerment Strategy Developed	TBD	-	NA	This result is already captured by "new organizational framework for CRSE"
Decentralized organizational structure of Senelec's Transmission and Energy Purchases Directorate (DTAE) is adopted	-	Senelec's adoption of DTAE's new decentralized organizational structure	Date at which a new decentralized organizational structure of DTAE is approved by the Senelec Board of Directors	-	NA	This result is already captured by the results on Senelec unbundling.
Technical assistance is provided	Training and technical assistance to the Utility's Internal Audit Department	Number of individuals benefiting from technical assistance	Number of individuals benefiting from at least 20 hours of technical assistance aimed at improving Senelec's capacity to manage the transmission network	Senelec audit staff training	Number of Senelec agents who received training or technical assistance	There is no material change to this indicator. Future M&E plan revisions may update indicators on staff trained to reflect all trainings provided.
Software to forecast renewable energy production is in operation	-	Forecasting software is in operation	Date at which the software to forecast renewable energy production is in operation	-	NA	This result is neither in the logic diagram of the Compact nor in that of the M&E plan. The result will be defined with Senelec capacity development plan.
The computerized maintenance management system (CMMS) is extended	The staff of the future transmission system operator is trained and equipped	TBD	TBD	Date of completion of the extension of the CMMS	Date of completion of the extension of the CMMS mobile applications for field technicians is made	This result may be further defined after the Senelec CMMS activity is further designed.

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact definition indicator	M&E plan indicator	M&E plan definition indicator	Reason for change
to mobile applications for field technicians						
Unmanned aerial vehicle provided to better assess maintenance needs	-	Use of unmanned aerial vehicle to visit lines	Date on which the UAV is procured by Senelec with MCC assistance	-	NA	This result was not included in the M&E plan since the with Senelec CMMS activity is not fully designed yet.
Security procedures are updated	-	Updated security procedures	Date on which the DTAE's security procedures are updated based on MCC's technical assistance	-	NA	This result is neither in the logic diagram of the Compact nor in that of the M&E plan
Trainings provided	-	Number of DTAE staff trained	Number of Senelec staff participating in a full training course or module provided through MCC assistance	-	NA	See comment related to "Technical assistance is provided"
Senelec staff participate in technical conferences and works	The staff of the future transmission system operator is trained and equipped	Number of Senelec staff participating in technical conferences and workshops	Number of Senelec staff participating in technical conferences and workshops	Number of employees trained in the computerized maintenance management system (CMMS)	The sum of Senelec employees who attended at least one training on the CMMS	See comment related to "Technical assistance is provided"
				Date of completion of the extension of the CMMS	Date of completion of the extension of the CMMS mobile applications for field technicians is made	
	Improved management of network assets			Number of Senelec agents trained in managing the assets of the MV network / BT	The sum of all qualified Senelec agents in managing the assets of the MV network / BT after a capacity building with the assistance of MCC.	
Improved maintenance	-	(P-13) Maintenance expenditure-asset value ratio	Actual maintenance expenditures / Total value of fixed assets	-	Actual maintenance expenditures / Total value of fixed assets.	Indicator is reported like an outcome

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact definition indicator	M&E plan indicator	M&E plan definition indicator	Reason for change
Software licenses needed to manage MV network data base are acquired	The MV network GIS is functional	Improved GIS capability	Total number of individual software licenses acquired (software includes ESRI, ARCGIS, ETL, and FME)	Functional GIS of MV/LV network	Date at which a consultant confirms the MV network GIS is functional. This includes the establishment of a database, provision of training, acquisition of material, and imaging performed	The M&E Plan outcome result is more comprehensive and should include all necessary tools for operating the GIS.
Database of MV network is completed	GIS is operational	Completeness of MV network database	Kilometers of MV lines in the data base / Total kilometers of MV lines	GIS completeness	Percentage of network assets included in Senelec's GIS database	The indicator definition has changed to include all network assets instead of MV lines only.
Analytica accounting and budget management based on Activity-based costing (ABC) method is adopted	-	Analytical accounting and budget management adopted	Date at which Senelec adopts the ABC method of analytical counting and budget management	-	NA	These results are neither in the logic diagram of the Compact nor in that of the M&E plan.
Audit of Oracle applications completed	-	Audit of Oracle applications	Date at which the final report of the Oracle application audit is approved by MCA-Senegal II	-	NA	These results are neither in the logic diagram of the Compact nor in that of the M&E plan.
Equipment provided to the logistical unit of the Directorate of Asset and Procurement Management (DAPA), Directorate of Information Services (DSI), and Directorate for Financial Accounting (DFC)	-	Equipment provided	Dollar value of equipment provided with MCC assistance	-	NA	These results are neither in the logic diagram of the Compact nor in that of the M&E plan.

Annex III Compact Result	M&E plan result	Annex III Compact Indicator	Annex III Compact definition indicator	M&E plan indicator	M&E plan definition indicator	Reason for change
-	Sector reimbursement plan adopted	-	-	Sector reimbursement plan adoption	Date at which the Ministry of Finance and Budget issues an official letter to MCA confirming its adoption of the reimbursement plan	This result is added because it is an important process milestone linked to a condition precedent
-	Electricity sector investor guide developed	-	-	Date of preparation of the investor's guide to the electricity sector	Date at which the electricity sector investor guide is developed	This result was included in the M&E plan's sub-activity logics.
-	Law on the regulator passed	-	-	Date of promulgation of the law on the regulator	Date decree on the law on the regulator is published in the official journal	This result was included in the M&E plan's sub-activity logics.
-	Geo-spatial mapping of the network is completed	-	-	Geo-spatial mapping of the network	Date geo-spatial mapping of the network is fully realized	This result was included in the M&E plan's sub-activity logics.
-	Improved economic dispatching model	-	-	Setup of new dispatching model	Date at which all software and tools for the new dispatch model are established and functional	This result was included in the M&E plan's sub-activity logics.
-	Energy sector development policy letter (LPDSE) 2024-2029 developed	-	-	LPDSE 2024-2029	Date the 2024-2029 LPDSE is developed	This result was included in the M&E plan's sub-activity logics.