LIBERIA ECONOMIC UPDATE

5th Edition | June 2024

Powering Growth with Reliable, Affordable and Sustainable Energy Access

WORLD BANK GROUP
Macroeconomics, Trade & Investment

1818 H Street NW, Washington DC 20433
Telephone: 202-473-1000; Internet: www.worldbank.org

Photos: Michael Nyumah Sahr | World Bank

LIBERIA
ECONOMIC UPDATE

5th Edition | June 2024

Powering Growth with Reliable, Affordable and Sustainable Energy Access

WORLD BANK GROUP
Macroeconomics, Trade & Investment

TABLE OF CONTENTS

LIST OF FIGURES

ABBREVIATIONS AND ACRONYMS

AE	Advanced Economies
CBL	Central Bank of Liberia
CLSG	Cote d'Ivoire Liberia Sierra Leone Guinea
COVID-19	Coronavirus Disease of 2019
ECOWAS	Economic Community of West African States
EMDEs	Emerging Markets and Developing Economies
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GST	Goods and Services Tax
GWh	Gigawatt hour
IFMIS	Integrated Financial Management Information System
IMF	International Monetary Fund
kWh	Kilowatt hour
kWp	Kilowatt peak
LD/L$	Liberian Dollar
LEC	Liberia Electricity Corporation
LERC	Liberia Electricity Regulatory Commission
LESSAP	Liberia Electricity Sector Strengthening and Access Project
LEU	Liberia Economic Update
LISGIS	Liberia Institute of Statistic and Geo-Information Services
M2	Broad money
MCHPP	Mount Coffee Hydropower Plant
MFDP	Ministry of Finance and Development Planning
MW	Megawatts
MWh	Megawatt hour
NPL	Non-performing Loans
ODA	Oversee Development Assistance
PPP	Public-Private Partnerships
PV	Photovoltaic
RESMP	Rural Energy Strategy and Master Plan
SDG	Sustainable Development Goals
SSA	Sub-Saharan Africa
TEC	Totota Electric Cooperative
TSA	Treasury Single Account
US$/USD	United States Dollar
VAT	Value-added Tax

PREFACE AND ACKNOWLEDGMENTS

This is the fifth edition of the Liberia Economic Update (LEU), a series of annual reports that assesses recent economic developments in Liberia and assists the government and its development partners in identifying emerging issues and addressing persistent challenges. This edition presents a broad overview of Liberia's macroeconomic context, assesses the macro-fiscal and growth outlook over the short and medium terms, and sheds light on the recent developments, challenges, and opportunities in the energy sector in Liberia. The objectives of the series are to (i) strengthen the analytical underpinnings of development policy in Liberia, and (ii) contribute to an informed debate on policy options to enhance macroeconomic management and accelerate progress on the World Bank Group's goals of eliminating extreme poverty and promoting shared prosperity on a livable planet.

The fifth edition of the Liberia Economic Update was prepared by a World Bank team led by Gweh Gaye Tarwo (Economist), including Mamadou Ndione (Senior Economist), Omar V. Al Sherif (Energy Specialist), and Alari Mahdi (Private Sector Specialist). The analysis also benefited from the advice provided by Aurelien Kruse (Lead Economist, ESAC2), Joern Huenteler (Senior Energy Specialist, IECE1) and Kagaba Paul Mukiibi (Senior Energy Specialist, IAWE4). Stefano Curto (Lead Economist), Sandeep Mahajan (Practice Manager), Ashish Khanna (Practice Manager), Georgia Wallen (Country Manager, Liberia), and Robert Taliercio (Country Director, Ghana, Liberia, and Sierra Leone) provided overall guidance.

Irene Sitienei (Program Assistant) and Joseph Koilor (Team Assistant) provided administrative support to the team. Michael Sahr (External Affairs Officer) helped with external communications.

The team is also grateful to officials of the Ministry of Finance and Development Planning, the Central Bank of Liberia, the Liberia Institute of Statistics and Geo-Information Services (LISGIS), and the Liberia Electricity Corporation for the information obtained, and the assistance and cooperation extended during the preparation of the report.

The findings, interpretations, and conclusions expressed in this publication do not necessarily reflect the views of the World Bank's Executive Directors or the countries they represent. The report is based on information current as of June 2024. The World Bank team welcomes stakeholder feedback on the content of the Liberia Economic Update. Please direct all correspondence to Gweh Gaye Tarwo (gtarwo@worldbank.org).

MAIN MESSAGES

Economic growth has rebounded over the past three years but is still fragile due to increased macroeconomic vulnerabilities. Growth rebounded in 2021 and has hovered around 5.0 percent, but Liberia's fiscal and current account deficits have been elevated. In 2023, Liberia's economy grew by 4.7 percent, primarily driven by the mining sector. Meanwhile, the country's fiscal deficit increased by 0.5 percentage points of GDP to 6.1 percent, mainly due to reduced domestic revenue and overspending. Liberia partly financed this increased deficit through inflationary debt monetization. The gap between savings and investment widened to an excessively high level, resulting in a current account deficit of 24 percent of GDP. This led to a decline in foreign exchange reserves and a depreciation of the exchange rate by 22 percent in 2023. Consequently, inflation rose to a double-digit rate of 10.1 percent, up from 7.6 percent in 2022. The country's gross external reserves decreased to USD 496 million (about 2.3 months of imports) from USD 644 million (3.0 months of imports) in December 2022. Noteworthy, Liberia remained at a moderate risk of external debt distress and a high risk of overall debt distress with a public debt ratio of 57.5 percent of GDP in 2023, up from 55.4 percent in 2022.

The industrial sector has been a key driver of Liberia's economic growth, particularly in 2023. The industrial sector, comprising gold mining and construction, experienced a significant 16.4 percent increase in gold production, contributing 2.5 percentage points to the overall economic growth in 2023. The construction, cement, and beverage sectors also played a meaningful role in boosting industrial output. The services sector, driven by improvements in financial, hospitality, trade, and transport services, grew by 3.8 percent. However, the agriculture sector lagged with only 1.4 percent growth due to declines in cocoa, palm oil, and rubber production, influenced by global price drops and export restrictions. The primary growth drivers on the demand side were private consumption, heightened public investment, and increased gold exports, which have shown resilience in the face of economic challenges.

Structural issues continue to hinder Liberia's economic diversification and resilience. The weak performance of the agriculture sector in 2023 underscores the urgent need to address these challenges. Global price drops for cocoa, palm oil, and rubber, export restrictions, and other structural challenges caused a decline in key agricultural production. The services and industrial sectors, while showing signs of improvement, still faces challenges in achieving sustained strong growth. Limited access to technology, poor infrastructure (i.e., road and energy), weak factor and product markets, and inadequate investment are significant issues that must be addressed to improve productivity and growth in these sectors. Significant improvement in the overall business environment and investment in education emphasizing learning outcomes will also be critical for unlocking the country's growth potential.

Sustaining growth also requires addressing macroeconomic and fiscal challenges. Amidst shifting overseas development assistance and global investment trends, taking concrete steps to address macroeconomic and fiscal challenges is necessary to generate the resources needed to support public investment for a better Liberia. The implementation of the recently enacted value-added tax (VAT) law will help boost domestic resource mobilization. On the expenditure side, the full utilization of existing systems such as the Integrated Financial and Management Information System (IFMIS) and the rollout of an electronic procurement system will help enhance expenditure management and improve governance in the near term. On the monetary front, ending the monetization of the fiscal deficit and taking concrete steps towards de-dollarization would help enhance the effectiveness and credibility of monetary policy. In addition, significant improvement in the overall business environment, investment in education emphasizing learning outcomes, and accelerating the implementation of existing infrastructure projects, particularly roads and energy, will be critical for unlocking the country's growth potential.

Achieving universal access to electricity remains a crucial challenge for supporting Liberia's economic growth, public service delivery, and household well-being. Recent achievements by the Liberia Electricity

Corporation (LEC) are showing promising signs that the country is on the right path to achieve universal electricity access targets in a reliable, affordable, and sustainable manner. Over the past few years, the commercial losses have dropped substantially from about 47.7 percent in 2021 to about 31.4 percent in 2023. At the same time, the number of customer connections has almost doubled from 142,947 in 2021 to 282,505 in 2023. Despite these advances, urban-rural disparities persist, with about two-thirds of the population still lacking access to electricity. Efforts are ongoing to bridge these disparities. The National Electrification Strategy of the Government of Liberia, supported by development partners, lays ambitious plans for universal access by 2030 through a combination of grid expansion, densification, utility revenue protection program, and off-grid solutions. The Liberia Electricity Sector Strengthening and Access Project (LESSAP) Phase 1 and the recently approved LESSAP Phase 2, financed by the World Bank, support these endeavors. The current generation capacity, however, is insufficient to meet the demand, often resulting in persistent blackouts that worsen during the dry months and have adverse implications on households and firms in terms of costs and productivity loss. With a growing demand for electricity, driven by improved access and economic growth, development of generation plants through low-cost renewable sources is ever more critical for Liberia's goal of achieving middle-income status by 2030. Liberia's Priority Investment Plan includes expanding the capacity of Mt. Coffee hydropower plant, installing utility-scale solar photovoltaic plants, developing Saint Paul 2 hydropower plant, and improving grid infrastructure to ensure reliable and affordable electricity supply.

Concerted efforts and reforms are needed to sustain and advance these gains. The country has embarked on extensive legal and institutional reforms, including the establishment of Liberia Electricity Regulatory Commission (LERC) in 2015 to improve governance in the sector and a successful transition from a Management Service Contract to a full-time local management team at LEC which led to substantial improvements in its operations and management. Liberia has also tripled its electricity generation capacity over the past decade, raising access from less than one-tenth to about one-third. However, challenges persist, such as weak financial health of the utility due to power theft and unpaid bills, which hampers its ability to maintain and develop infrastructure and attract private investments and capital needed to implement these plans. The LEC's financial instability and inability to cover operating costs and settle debts present a substantial fiscal burden for the government. Additionally, weak regulatory enforcement has limited private sector participation in the energy sector, further constraining opportunities for reliable electricity supply and access expansion. Addressing the sector's challenges requires a comprehensive action plan to enhance sector revenues, improve distribution efficiencies, promote private sector participation, and implement new energy projects.

Ambitious reforms are needed for private sector participation in the economy and energy sector. Aspirations of increased private sector participation in the economy and the energy sector cannot be realized without ambitious reforms to improve the business environment and sector competitiveness. Liberia's infrastructure deficit presents opportunities for private sector investment from foreign and domestic investors. As Liberia seeks energy security while considering climate and environmental goals, there is potential for investment in utility-scale solar energy generation. The global outlook is positive, with private sector investment in clean energy reaching $1,174 billion in 2022. With vast unutilized land, renewable energy potential, and favorable climatic conditions, Liberia is well-positioned to attract a share of the USD 10 billion investment in clean energy flowing into Africa.

Overcoming barriers to private sector investment in Liberia is imperative for future growth. Liberia can potentially benefit from the increased demand for critical minerals essential for clean energy technology, provided more data on its mineral assets are available. However, Liberia must overcome a relatively uncompetitive business environment to attract or expand private sector investment. Key global indices indicate that Liberia's business environment hinders opportunities for private sector investors to generate returns, further exacerbated by high finance costs, the weak financial position of the LEC, weak purchasing power, high start-up costs, inadequate public infrastructure, and a lack of required skills in the domestic labor market.

Leadership and coordination are essential for impactful reforms. Leadership, coordination, and prioritization are crucial for impacting the business environment and sector reform agenda. The government has expressed its commitment to private sector-led growth and leveraging private sector investment in key sectors, including energy. To transform this goodwill into tangible impacts, transparent leadership, a robust coordination mechanism inclusive of private sector representatives, and prioritization of reforms are needed. Improving Liberia's business environment requires a mix of legal and regulatory reforms and practical interventions to support the private sector. Specifically, driving investment in the energy sector requires short, medium, and long-term priorities: establishing laws, regulations, and institutions to support public-private partnerships (PPP); sustaining sector reforms to lower risks; investing in grid infrastructure; developing sustainable finance products and mechanisms; inclusive investment efforts for domestic investors; providing incentives to lower costs for renewable energy technologies; and maintaining a stable macroeconomic environment.

PART ONE
RECENT ECONOMIC DEVELOPMENTS AND OUTLOOK

1.1 Global and regional economic conditions in 2023: Weak global growth and falling commodity prices

Global growth slowed in 2023 as tighter monetary policies weigh on economic activity. Growth softened to 2.6 percent, down from 3.0 percent in 2022 with notable variation across regions. Growth in advanced economies weakened to 1.5 percent in 2023 from 2.5 percent in 2022, reflecting tighter credit conditions and higher borrowing costs resulting from restrictive monetary policies and less fiscal support. Emerging markets and developing economies (EMDEs) experienced a slight uptick in growth to 4.0 percent from 3.7 percent in 2022 despite subdued productivity gains and slowing in China. In Sub-Saharan Africa (SSA), external headwinds from slow growth in advanced economies, domestic policy tightening, increased political instability, and violent conflict weighed on growth in the region. Consequently, growth in SSA decelerated to 2.9 percent in 2023 from 3.7 percent in 2022.

In 2023, commodity prices receded from the highs of 2022 as global growth weakened. On average, the global commodity price index in 2023 was 24.8 percent lower than the 2022 level, due to declining energy and agriculture prices. Energy and agriculture prices were 30.5 percent and 7.9 percent lower than 2022 levels, respectively (Figure 1). Notably, the prices of some of Liberia's major exports such as rubber, iron ore, and palm oil declined, with implications for economic activity and fiscal revenue. Amid easing commodity prices and tighter monetary policies, global inflation decelerated but remained sticky in many countries.

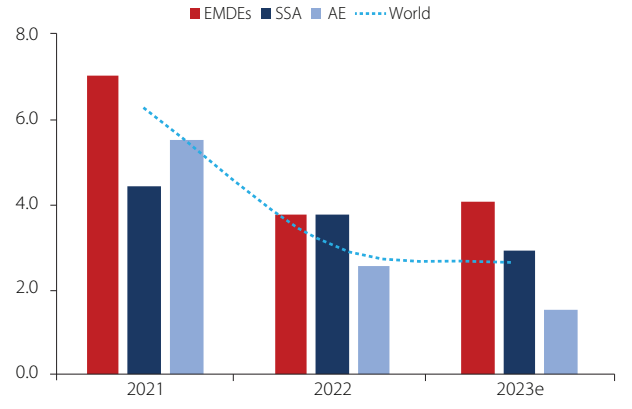
1.2 Recent developments in Liberia

1.2.1 Real sector developments: Despite global headwinds, Liberia's economic performance was positive thanks to the industrial sector

Liberia's economy continued to show growth in 2023 despite global headwinds from depressed demand in advanced economies and falling prices of some export commodities. Liberia's economy expanded by 4.7 percent in 2023, supported by continued expansion in industrial output and recovery in services. The industrial sector contributed the most to growth (2.5 percentage points), mostly from gold mining and construction, followed by the services sector (1.7 percentage points), while the contribution of agriculture declined (to 0.5 from 2.3 percentage points), reflecting falling output of key agricultural products.[1] Despite decline in international prices, iron ore production increased slightly supporting the expansion in industrial output. On the demand side,

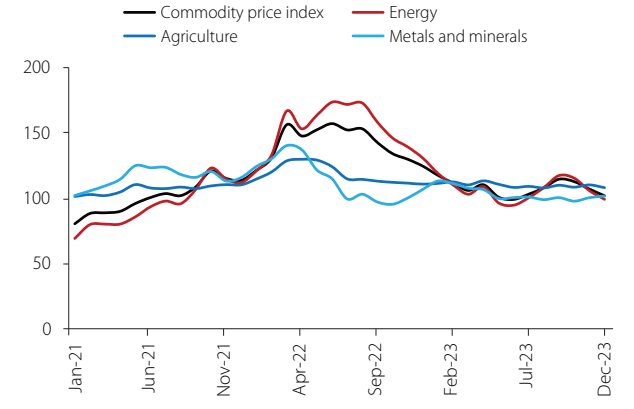
FIGURE 1: Global growth weakened, and commodity prices receded in 2023

(a) Global growth weakened, and commodity prices receded in 2023



Source: World Bank, Global Economic Prospects January 2024
Note: AE=Advanced Economies; EMDEs=Emerging market and developing economies; SSA=Sub-Saharan Africa

(b) Commodity price index (2010=100)



Source: World Bank Commodity Price Data (The Pink Sheet)
Note: Indices are based on prices in nominal US dollars, 2010=100

[1] *In 2023, both rubber and palm oil production declined reflecting unfavorable international prices.*

continued recovery in private consumption, increased public investment spending, and a boom in gold exports were the main drivers of growth.

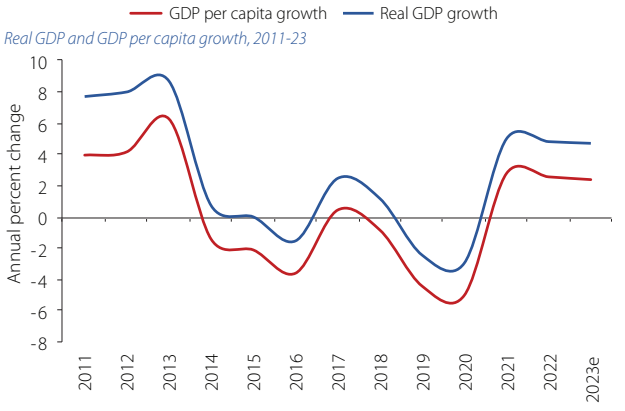
Mining, particularly gold production, and construction activity supported industrial output growth. Industrial growth has increased consistently in recent years, reaching 13.9 percent in 2023, up from 6.7 percent in 2022 driven by gold mining. Favorable international prices coupled with enhanced production capacity and high external demand supported the increase in gold production. While iron ore production increased slightly (by 1.0 percent), gold output rose by 16.4 percent in 2023. In manufacturing, the production of cement and beverages increased by 5.6 percent and 64.2 percent, respectively, driven by increased construction activity and an uptick in electricity, in part, as the government scaled up electricity supply through power imports. Industrial output growth averaged 11.3 percent over the last three years.

Recovery in the services sector supported growth in 2023. Output of services expanded by 3.8 percent in 2023, compared with 2.8 percent in 2022. Improvements in the financial and hospitality subsectors, as well as the boost in trade and transport services were the drivers of the increase in service output. Uptick in activities related to the general election and the increase in electricity supply owing to power imports during the year helped lower costs on financial service providers and the hospitality industry and boosted services output.

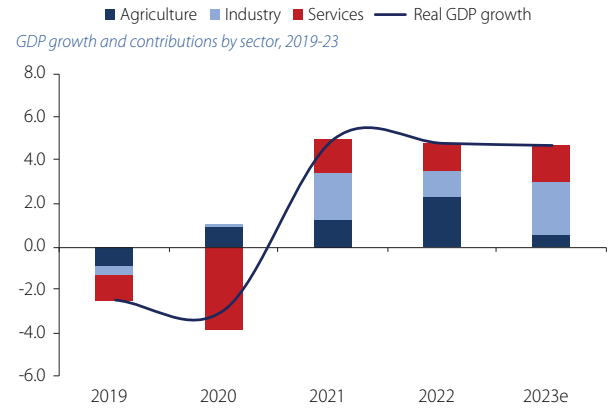
Growth in the agriculture sector was sluggish, reflecting declines in cash crop production. In 2023, the agriculture sector experienced 1.4 percent growth, compared to 5.9 percent in 2022, as cocoa, palm oil, and rubber production declined. Cocoa production declined by 46.9 percent, despite improvement in international prices, while palm oil and rubber output fell by 10.9 percent and 2.0 percent, respectively, mirroring unfavorable global prices but also the temporary ban on unprocessed

FIGURE 2: Real sector development

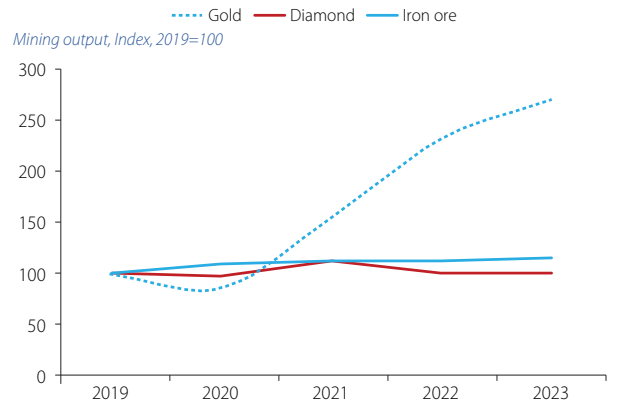
(a) Economic growth has taken off since 2021…



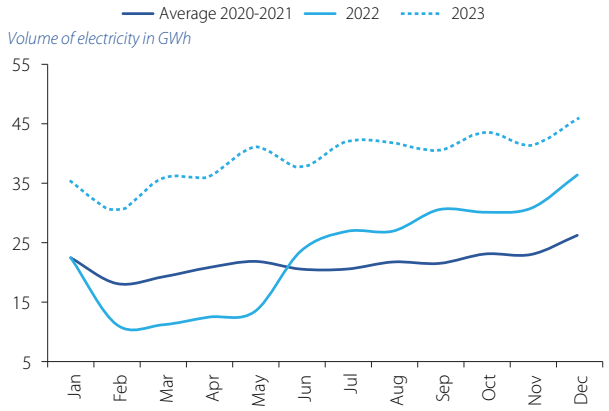
(b) …largely driven by mining, particularly gold production in 2023



(c) Mining output growth has been driven by gold in the last three years



(d) Increased electricity supply driven by power imports boosted services output in 2023



Source: Liberian authorities, IMF, World Bank staff estimates

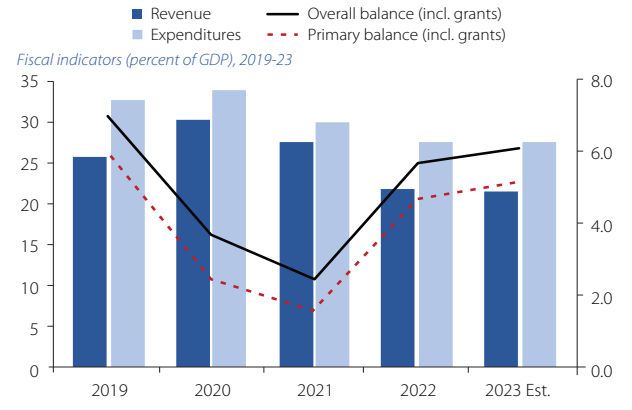
rubber exports by the government in the last quarter of the year. Limited access to technology, inefficient farming practices, low investment, and fragmented value chains, among other factors, continue to constrain output in the agriculture sector, particularly for food crop production. In the last three years, growth in the agriculture sector has gained some momentum, averaging 3.5 percent during 2021 to 2023.

1.2.2 Fiscal developments: Fiscal consolidation remains critical for macroeconomic stability and public debt management

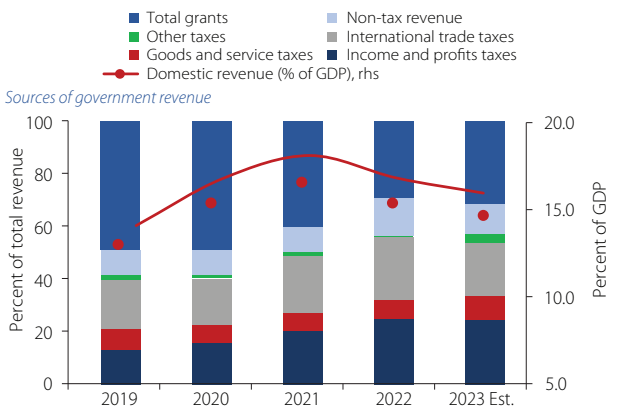
Liberia's fiscal situation worsened in 2023 under the weight of a decline in domestic revenue and spending overruns. Total revenue and grants declined by 0.3 percent of GDP to 21.3 percent in 2023 mainly due to weak performance of income and trade taxes and mining revenues. Income taxes fell by 0.3 percent of GDP to 5.2 percent in 2023 while trade taxes dropped to 4.3 percent of GDP in 2023 from 5.2 percent in 2022. Mining revenues declined due to lower-than-expected royalties and rents. Royalties from iron ore fell below the budget target by 52 percent reflecting the 14 percent decline in iron ore export. Similarly, royalties from gold fell to 0.2 percent of GDP, down from 0.4 percent in 2022, 54 percent lower than the collection target, despite 16.4 percent increase in gold export. Notably, surface rentals from mining also fell below collection. Public spending increased slightly from 27.2 percent of GDP in 2022 to 27.3 percent in 2023 due to increases in capital spending, government consumption, and personnel costs. Notably, the increase in public spending was underpinned by expenditure overruns-–there were large slippages on just a few budget lines. Spending on security, particularly the National Security Agency, was three times budget while the National Elections Commission overspent its budget by 8.5 percent. The decline in domestic revenues coupled with these expenditure overruns kept the fiscal deficit elevated in 2023. The overall fiscal deficit edged up to 6.1 percent of GDP in 2023, up from 5.6 percent in 2022. The fiscal deficit was financed by concessional resources, including budget support loans (1.5 percent of GDP), IMF Special Drawing Rights (0.9 percent of GDP), and direct borrowing from the Central Bank (1.9 percent of GDP).

FIGURE 3: Trends in key fiscal indicators (revenue, expenditure, and debt)

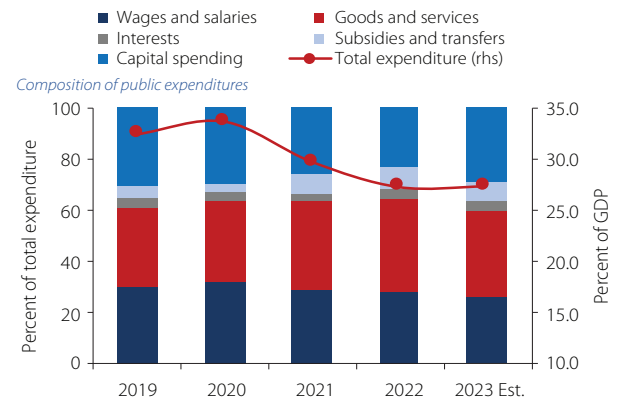
(a) Liberia fiscal deficit remained elevated in 2023…



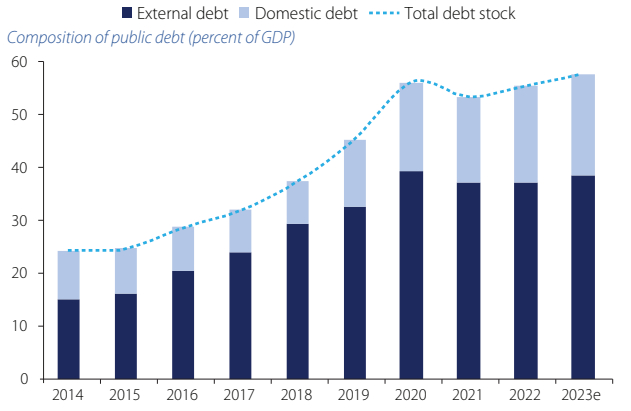
(b) … as domestic revenue declined…



(c) … and public expenditure increased slightly



(d) Public debt has been increasing steadily but seems to stabilize in the last three years



Source: Liberian authorities, IMF, World Bank staff calculations.

Domestic revenue declined for the second year in a row, driven largely by non-tax revenue. Overall, domestic revenue declined by 0.7 percentage points to 14.5 percent of GDP in 2023, while grants increased by 0.4 percentage points of GDP. Non-tax revenue decreased to 2.4 percent of GDP in 2023, down from 3.0 percent in the previous year, reflecting lower-than expected mining revenues. Despite sturdy growth in the sector, mineral royalties fell below target by 38 percent. Tax revenue declined slightly by 0.1 percent of GDP to 12.2 percent, reflecting weaker income and trade taxes. The country's low tax-to-GDP ratio is explained by the reliance on international trade and good and services taxes (GST) with a limited tax base and regimes characterized by multiple exemptions that further narrow the tax base and complicate administration. Together, trade taxes and GST accounted for 52.1 percent of total tax revenues, slightly down from 53.6 percent in the previous year. Notably, a comprehensive tax expenditure report[2] revealed that a total of US$145.8 million (4.2 percent of GDP or 29.4 percent of total revenue) was foregone in tax expenditure in 2021, with GST contributing the largest portion of the revenue loss, estimated at US$74.9 million (2.1 percent of GDP). Liberia's incentive regime is disproportionately oriented towards granting exemptions from GST and import duties on imported capital equipment, raw materials, and other critical inputs.

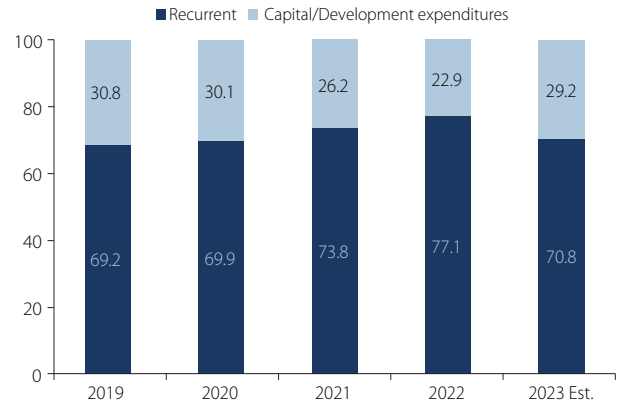
High recurrent expenditures remain a challenge for the authorities. The elevated level of recurrent expenditures continues to constrain capital and social spending. In 2023, recurrent expenditures as a share of total government spending fell slightly below the five-year average of 72 percent to 71 percent while capital expenditure accounted for the remaining 29 percent largely driven by ODA. Excluding ODA, recurrent expenditure for more than 95 percent of government spending. Personnel costs, spending on goods and services, and debt service payments were the main drivers of recurrent expenditures. Together, they constituted 62.2 percent of total expenditure in 2023, down from 66.7 percent in 2022. The high recurrent cost, underpinned by non-discretionary expenditures such personnel costs and debt service payments, narrows the room for fiscal consolidation on the expenditure side. In 2023, for instance, personnel costs and interest payments accounted for more than half of government revenue (54 percent) and nearly two-third of tax revenue (65 percent).

Liberia's public debt has been rising steadily in the last decade. Total public debt continued to climb, reaching an estimated 57.5 percent of GDP in 2023, up from 55.4 percent in 2022 (Figure 3D). External debt rose from 37.2 percent of GDP in 2022 to 38.4 percent in 2023 while domestic debt increased from 18.2 percent of GDP to 19.1 percent during the same period. A recent debt sustainability analysis assessed Liberia to be at moderate risk of external debt distress and high risk of debt distress for total public debt with limited space to accommodate shocks.[3] Debt servicing, both domestic and external, has proved challenging in recent years. In the last two years, poor cash management and the absence of a treasury

FIGURE 4: Composition of government expenditure

(a) High recurrent expenditures continue to limit capital and social spending…

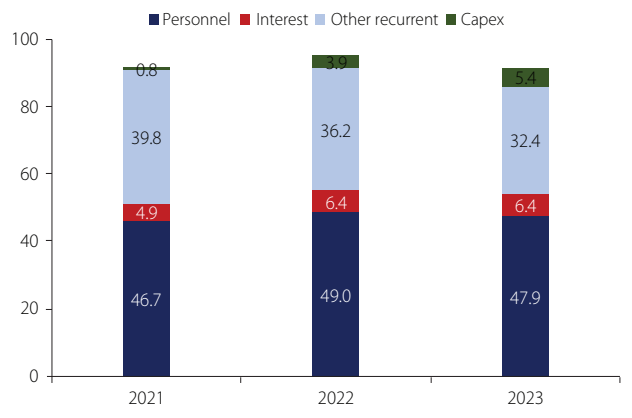
Composition of public expenditure (percent of total), 2019-23



Source: Liberian authorities, IMF, World Bank staff estimates

(b) …and narrow the room for fiscal consolidation as personnel cost and interest payments account for more than half of government revenue

Expenditure as share of government revenue (on-budget), 2021-23



Source: Liberian authorities, IMF, World Bank staff estimates

[2] *Liberia Tax Expenditure Report (FY2018 – 2021): https://www.mfdp.gov.lr/index.php/docs/publications/publications/liberia-tax-expenditure-report-fy2018-2021*

[3] *World Bank and IMF (2023), Liberia: Joint Bank-Fund Debt Sustainability Analysis (September 2023).*

single account (TSA) have caused the government to service its debt obligations with significant delays. The establishment of a TSA and enhancement of cash management would be critical for effective debt and expenditure management.

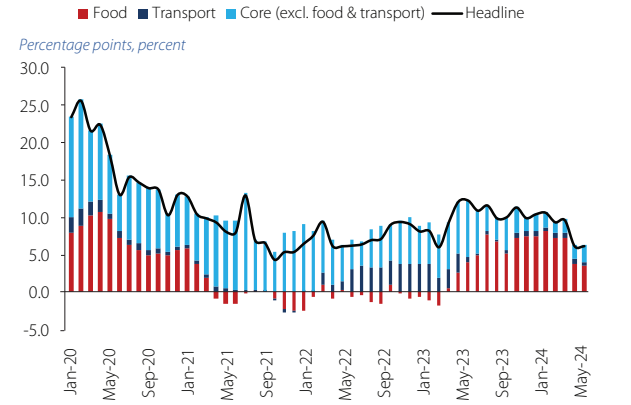
1.2.3 Monetary policy and financial sector developments: The central bank maintained a tight policy stance to rein in inflation, while vulnerabilities in the financial sector moderated

Liberia's inflation increased to 10.1 percent in 2023, primarily driven by food prices, exchange rate depreciation, and monetization of the budget deficit. Food inflation contributed the most (3.6 percentage points) to headline inflation, reflecting rising food prices, particularly during the last half of the year. Food inflation rose steadily, reaching 26.9 percent by end-December 2023 and an annual average of 12.3 percent in 2023, compared to a disinflation of 1.6 percent in 2022. Bread and cereal prices, which include imported rice, and cassava prices were the main driver of food inflation. Imported food inflation rose to 16 percent in 2023, up from 1 percent in 2022, reflecting the increase in imported rice prices in domestic markets, while domestic food inflation climbed to 9 percent compared to a disinflation of 4 percent during the same period. Both transport and core inflation moderated in 2023 to 19.4 percent and 8.2 percent, respectively, down from 32.8 percent and 9.8 percent in 2022. Notably, by end-December 2023, the Liberian dollar to US dollar exchange rate increased by 22.0 percent (year-on-year), trading at L$188.5 per US dollar, up from L$154.5 per US dollar in December 2022 with passthrough to domestic prices.

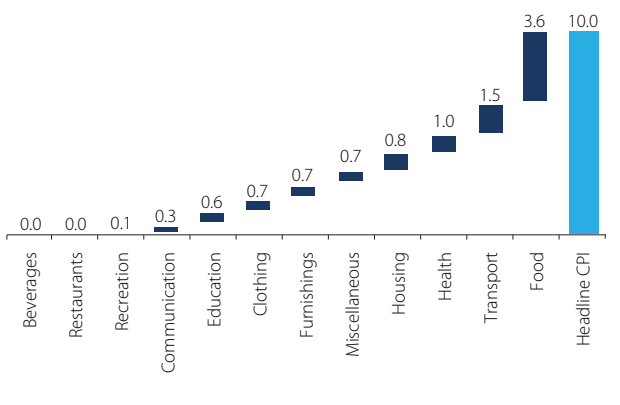
The Central Bank of Liberia (CBL) has kept monetary policy tight to rein in inflation but not without slippages. In 2023, the CBL raised the policy rate twice (in May and July) by 500 basis points cumulatively to 20.0 percent and held it throughout the year to rein in inflation. The CBL also took additional measures including the removal of the ceiling on the offered amount of CBL bills to help accommodate the growing oversubscription, absorb

FIGURE 5: Developments in the monetary and financial sector

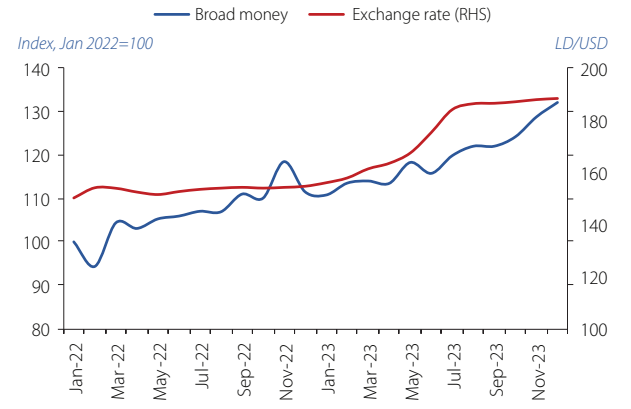
(a) Liberia's inflation increased in 2023 with increase in food prices



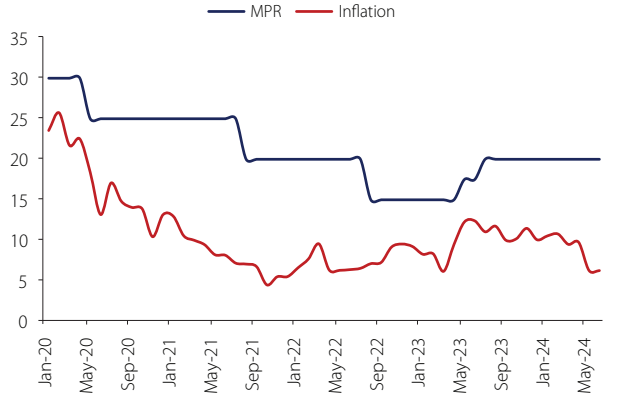
(b) Liberia's inflation increased in 2023 with increase in food prices



(c) Liberia's inflation increased in 2023 with increase in food prices



(d) Liberia's inflation increased in 2023 with increase in food prices



Source: Liberian authorities, IMF, World Bank staff calculations.

excess liquidity in the banking system, and strengthen its monetary policy operations. Meanwhile, there were some slippages. The monetization of the budget deficit by the CBL amounted to about 2 percent of GDP in 2023. This partly contributed to the inflationary pressures during the year and derailed the CBL's policy stance. The high level of dollarization in Liberia also continues to limit the effectiveness of monetary policy. In 2023, the share of broad money, credit, and deposits in US dollars remained considerably high at 75 percent, 94 percent, and 88 percent respectively. Inflationary pressures are easing in the first half of 2024 as the CBL maintains a tight policy stance. Headline inflation has moderated to 6.2 percent in June 2024, down from 10.5 percent in January 2024, 6.2 percentage points lower than in June 2023.

Despite a significant decline in net foreign assets, broad money (M2) growth accelerated in 2023, reflecting credit to the economy and claims on the government. The rate of growth in money supply (M2) accelerated to 18.4 percent in 2023, from 15.3 percent in 2022 as the net claims on the government and credit to the private sector took off. Net claims on government increased by 21.3 percent in 2023 as the government loosened fiscal policy and financed its fiscal deficit by borrowing from the central bank. The stock of credit to the private sector also surged by 34.2 percent in 2023 compared to 13.3 percent in 2022, driven by trade finance (32 percent), personal loans (15 percent), services (14 percent) and construction activity (10 percent). Notably, the stock of credit to the private sector, which has stagnated at 15.0 percent of GDP in the last two years, increased by 3.5 percentage points of GDP to 18.5 percent in 2023 but remained well below the SSA average of 27 percent.

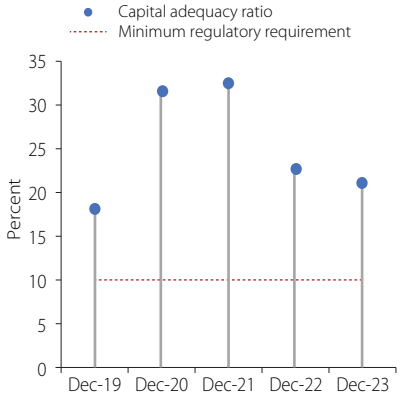
Financial-sector vulnerabilities moderated as the non-performing loans (NPLs) ratio improved, and the banking sector remained adequately capitalized. As of December 2023, the average nonperforming loans (NPL) ratio declined significantly to 11.2 percent (close to the tolerable level of 10 percent), down from 16.4 percent at end-December 2022. The improvement in the NPL ratio reflects the CBL's continued engagement with banking institutions to strengthen their internal credit strategy and improve asset quality. Broadly, banking institutions were compliant with prudential capital and liquidity requirements. The banking industry has significant capital reserves to withstand unexpected shocks. As of December 2023, the capital adequacy and liquidity ratios stood at 21.2 percent and 45.7 percent, respectively, well above the minimum regulatory requirements of 10.0 and 15.0 percent. Notably, most primary balance sheet indicators expanded, including assets (by 24 percent), deposits (by 34 percent), loans and advances (20 percent). Returns on equity and assets increased to 22.7 percent and 3.0 percent, respectively, in December 2023, up from 14.0 percent and 2.1 percent in December 2022.

1.2.4 External sector developments: Current account deficit remained elevated in 2023 driven by weak export growth and higher imports

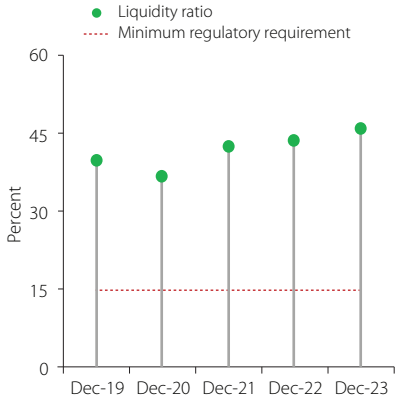
Liberia's export performance moderated, reflecting lower international prices and production of some key exports. Gold exports surged by 24.8 percent in 2023 on the back of favorable international prices. However, the increase in gold exports was partially offset by declines in exports of other key commodities. Rubber exports stagnated in 2023 while iron ore and palm oil exports

FIGURE 6: Nonperforming loans ratio improved, and the banking sector remained adequately capitalized in 2023

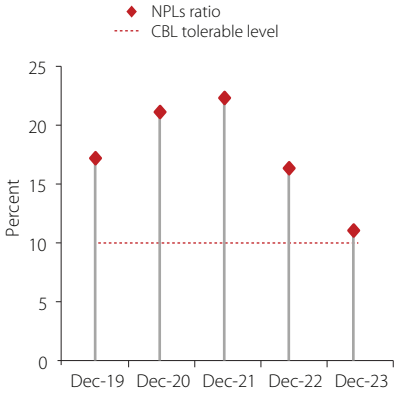
(a) Capital adequacy ratio, 2019-23



(b) Liquidity ratio, 2019-23



(c) Nonperforming Loans ratio, 2019-23



Source: Central Bank of Liberia, World Bank staff estimates

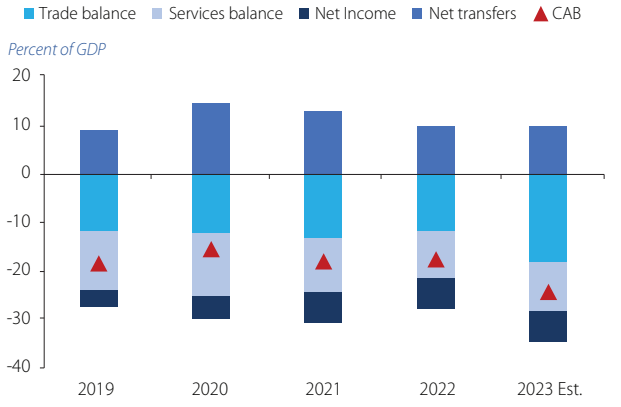
fell by 13.8 percent and 28.6 percent, respectively, due to lower international prices. Overall, the total value of exports increased by 4.6 percent in 2023, compared to 22.9 percent in 2022. Gold accounted for close to two-third of the total export value (62 percent) in 2023 (Figure 7B).

Meanwhile, merchandise imports increased, driven by petroleum products, machinery, and elevated food prices. Import growth accelerated to 20.7 percent in 2023, faster than the 16.2 percent growth in 2022. In 2023, petroleum products and machinery accounted for 24 percent and 22 percent of the total import bill, respectively, reflecting the uptick in activity related to the general elections. Food accounted for a fifth of the overall import bill, reflecting rising food prices. Together, petroleum products, machinery, and food accounted for two-thirds of the total value of imports (Figure 7C).

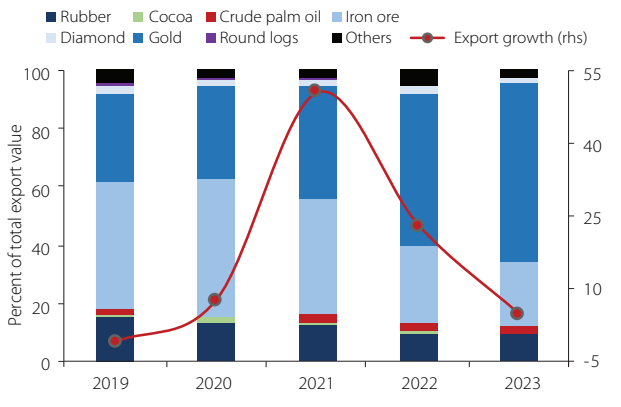
Consequently, the current account balance worsened in 2023 due to deterioration in the trade balance. The moderate growth in exports and significant increase in imports resulted in a higher trade deficit. The trade balance deteriorated significantly, reaching 18.4 percent of GDP from 11.8 percent in 2022, as growth in imports driven by petroleum, machinery, and food outpaced export growth. As a result, the current account deficit reached 24.4 percent of GDP in 2023, up from 17.7 percent in 2022, its highest level post-COVID. Despite an increase in the capital and financing account, which reflects higher foreign direct investment (FDI) inflows (8.7 percent of GDP) and funds drawn from donor-funded projects, the balance of payments showed a deficit of US$184 million (4.2 percent of GDP). This deficit was financed through net IMF credit, loans, and drawdowns of gross official reserves. Thus, Liberia's gross external reserves declined to only US$496 million (approximately 2.3 months of imports) in 2023 from US$644 million (3.0 months of imports) in December 2022.

FIGURE 7: Current account deficit remained elevated in 2023 driven by weak export growth and higher imports

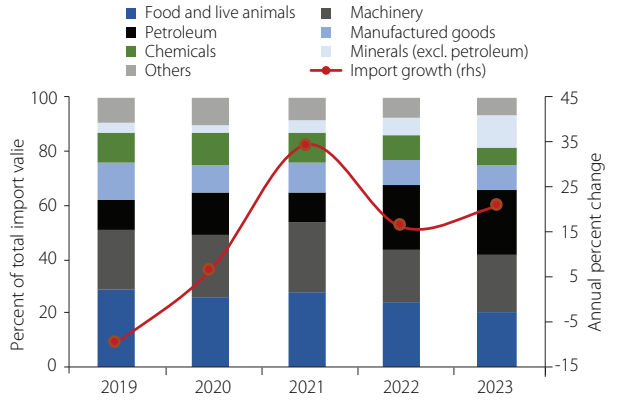
(a) Liberia's current account balance worsened in 2023 driven by trade dynamics



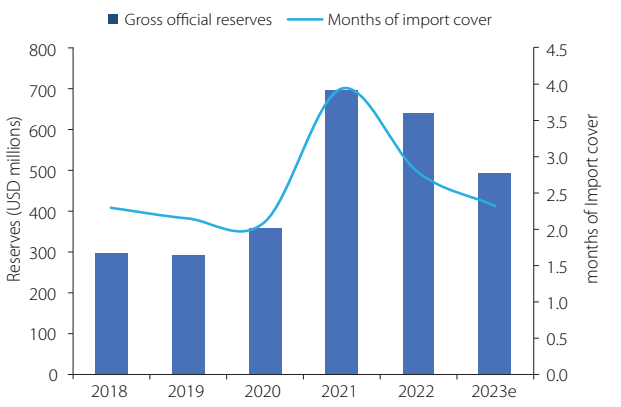
(b) Export growth improved slightly driven by gold and ….



(c) Merchandise imports increased significantly on the back of food and petroleum prices, but also machinery



(d) Liberia's gross external reserves decline less than 3 months of imports



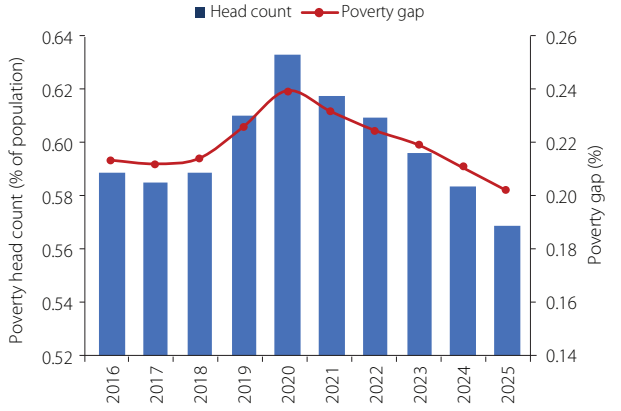
Source: Liberian authorities, IMF, World Bank staff calculations

1.2.5 Poverty developments: Recent growth has moderated Liberia's elevated poverty rates

The rebound in economic activity in the last three years has helped bring down the poverty rate in Liberia, but levels remain high. On the back of economic recovery, the poverty headcount ratio measured at the national poverty line shows that national poverty has decreased to 59.7 percent in 2023, from a peak of 63 percent in 2020 (Figure 8). Notably, food prices remain one of the major drivers of poverty, with a disproportionate impact on the poor, who are net consumers of food. Rising food prices put the poor in Liberia at risk of food insecurity and of falling into deeper poverty.

FIGURE 8: National poverty estimates and projections, poverty head count and poverty gap (% of population and %), 2016-2025p

Poverty has decline since the pandemic, but levels remain high



Source: Liberia Household Income and Expenditure Survey (2016) and World Bank staff calculations

1.3 Near and medium-term outlook and risks

1.3.1 Global economic outlook: Moderate growth and declining commodity prices

Global economic activity is expected to remain moderate in the medium term. Global growth is projected to edge down to 2.4 percent in 2024 from 2.6 in 2023 before picking up in 2025.[4] Tight monetary conditions will continue to constrain demand in advanced economies, while modest recovery in exports and investment are expected to support growth in Emerging Markets and Developing Economies (EMDEs) in the next two years, notwithstanding China's slowing growth. Growth in EMDEs is projected to remain steady at about 3.9 percent a year in the medium term. In SSA, growth is expected to accelerate to 3.8 percent in 2024 from 2.9 percent in 2023 and firm further to 4.1 percent in 2025 as inflationary pressures subside and financial conditions ease. Of note is that slowing global demand will ease pressures on commodity prices, with implications for commodity exporters including Liberia. Further declines in the prices of iron ore and rubber could have implications for growth, fiscal revenues, and export earnings in Liberia; however, easing oil prices could be favorable for Liberia as a net oil importer. Global headline inflation is projected to moderate further over 2024-25, with core inflation slowing and commodity prices declining.

Commodity prices are projected to decline slightly this year and next but remain higher than before the pandemic.[5] Energy prices are expected to fall by 3 percent in 2024 and by 4 percent in 2025 while prices of agricultural products are expected to ease due to improved supply conditions. Metal prices will remain steady in 2024, then increase slightly in 2025.

Risks to global and regional outlook are tilted to the downside. Downside risk include rising geopolitical tension: an escalation in conflict in the Middle East and its consequent impact on energy supplies and prices; persistent inflation and even tighter policy; escalation of financial stress and weaker-than expected activity in China; and pronounced weakness in major economies. In SSA, political instability and violence, disruptions to global or local trade and production, and more frequent and intense adverse weather events could further slow growth, exacerbate poverty, and fuel debt distress in some countries.

1.3.2 Liberia's outlook and risks

Renewed interest and investment in mining coupled with continued implementation of critical reforms in key enabling sectors are expected unlock Liberia' growth potential in the medium term. The economy is expected to expand by 5.3 percent in 2024, then accelerate to reach potential in 2025 and afterwards, supported by ongoing expansion in the mining sector and the expected dividends generated by reforms in critical sectors such as energy, transportation, trade, and financial services. Together, development of current mining projects, improved access to affordable energy, and enhanced infrastructure (i.e., roads and telecommunication) will boost investment and productivity and stimulate output across all sectors.

[4] *Global Economic Prospects, January 2024, World Bank.*

[5] *Commodity Markets Outlook, April 2024, World Bank.*

Inflation is expected to recede in 2024 and beyond if a firm monetary stance is maintained. Headline inflation is expected to retreat to an average of 7.7 percent in 2024, down from 10.1 percent in 2023, reaching 5.4 percent by 2026. By end-May 2024, headline inflation was down to 6.2 percent from 10.5 percent in January 2024. The anticipated decline in inflation in the medium term would be supported by the projected softening in global oil prices, CBL's restrictive monetary policy stance, but also heightened efforts to address supply-side constraints such as energy and roads. A commitment to zero monetary financing of the budget deficit would also be critical.

The fiscal deficit is projected to moderate in the medium-term, but fiscal management will remain challenging in 2024 due to the delayed approval of the budget during transition to a new administration. The overall fiscal deficit is expected to decline to 3.2 percent of GDP in 2024 and an average of 3.4 percent over 2025 and 2026. Total revenue and grants are expected to increase in 2024 and beyond, reflecting anticipated increase in domestic revenue by 1.0 percent of GDP to 15.5 percent in 2024 and average of 16.5 percent in 2025-26 as the country replaces the current goods and services tax (GST) with a value added tax (VAT), boosting tax revenues in the coming years. Maintaining fiscal deficits at sustainable levels in the medium term would require the implementation of strict measures to enhance domestic resource mobilization and improve expenditure controls. The Government recently enacted the VAT law and assessed the scale of tax expenditures with the aim of boosting domestic resource mobilization in the medium term while scaling up the use of existing integrated systems to strengthen expenditure controls. The implementation of the VAT law is expected to commence in 2025. On the expenditure side, current expenditure is expected to decline as the government maintains the current wage bill and takes steps to strengthen expenditure controls and curb spending overruns. Meanwhile, the delayed approval of the 2024 budget by five months following the transition to a new administration could pose a challenge for effective fiscal management. On the spending side, the approved budget for central government for 2024 is US$738.9 million of which recurrent spending accounts for 86 percent and public investment 14 percent. Wages and salaries take up 40 percent of the budget, debt servicing (18 percent), grants for the provision of basic social services in the health and education sectors (about 17 percent), and consumption spending (13 percent).

Liberia's current-account deficit will remain elevated in the medium term, driven by foreign direct investment-related capital imports. The current account deficit is projected to narrow to 21.7 percent of GDP in 2024, down from 24.4 percent in 2023, but expand again to about 25 percent of GDP over 2025 and 2026 as domestic demand picks up. Gross external reserves are projected to remain below 3.0 months of imports.

The medium-term outlook is subject to significant risks, skewed to the downside. Inflationary pressures could escalate due to rising import prices, especially for essential commodities such as food and fuel. Any significant drop in prices for key export commodities such as gold, iron ore, and rubber would undermine macroeconomic stability. In addition, ineffective implementation of the 2024 budget, which includes crucial fiscal consolidation measures, may create larger than expected fiscal gaps and lead to the accumulation of arrears, including those related to the banking sector.

1.3.3 Policy options to support macroeconomic stability, accelerate growth, and reduce poverty

Growth in the Liberian economy has rebounded averaging about 5.0 percent in the last three years, but accelerating and sustaining growth will require institutional reforms and targeted public spending. Following a decade of sustained growth at an average annual rate of 7.4 percent during 2004 to 2013, growth in Liberia has slowed to an average 1.2 percent per annum during 2014 to 2023 – a deterioration of 0.8 percentage points per year in per capita terms. While growth has returned to about 5.0 percent per year since 2021, accelerating and sustaining economic growth will require prudent macroeconomic management, improved governance, and implementation of structural reforms in key enabling sectors. Liberia must maintain low and stable inflation, improve domestic resource mobilization, consolidate expenditures, and manage its debt sustainably to support growth and create jobs. The country must embark on institutional reforms that enhance the business environment to attract private investment and must scale up basic services and infrastructure to unlock the country's

growth potential. To accelerate and maintain productivity growth and employment creation in Liberia will require: (i) upgrading the country's existing production and export base; and (ii) building institutions to broaden the country's endowments, strengthen competitiveness, and expand opportunities for private sector-led growth.

Liberia must begin to take concrete steps that address macroeconomic challenges in the near term and support growth in the medium to long term. The implementation of the recently enacted VAT law will help boost domestic resource mobilization. On the expenditure side, the full utilization of existing systems such as the integrated financial and management information system to enhance budget credibility, and the rollout of an electronic procurement system will help enhance fiscal management and improve governance in the near term. On the monetary front, ending the monetization of the fiscal deficit and taking concrete steps towards de-dollarization would help enhance the effectiveness and credibility of monetary policy. In parallel, investment in education with emphasis on improving learning outcomes and accelerating the implementation of existing infrastructure projects, particularly roads, telecommunication, and energy, would be critical for unlocking the country's growth potential.

PART TWO

POWERING GROWTH WITH RELIABLE, AFFORDABLE, AND SUSTAINABLE ELECTRICITY ACCESS

2.1 Electricity and Liberia's economic development

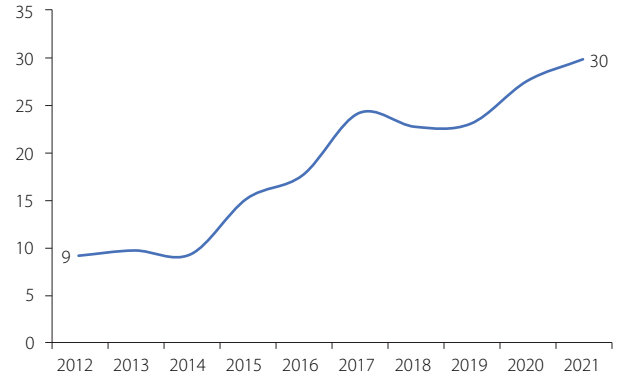
Liberia has set for itself a goal of reaching a middle-income status by 2030. Electricity's strong connection with growth, productive firms, and good jobs makes it a critical concern for the county as it pursues middle-income status. In pursuit of growth, as well as social development, Liberia, like other countries, has committed to an electrification agenda that "ensures access to affordable, reliable, sustainable and modern energy for all" by 2030 as set out in the global Sustainable Development Goals (SDG 7). The country has since made strides to expand access to affordable and reliable energy for its population. However, at the current rate of electrification, among other factors, Liberia is most likely to miss out on its electrification agenda, but also its growth target unless it embarks on an ambitious reform agenda. This Special Focus of the Economic Update sheds light on recent developments and challenges in the energy sector in Liberia and suggests pathways towards sustainable, reliable, and affordable electricity access.

Despite some recent achievements, Liberia's electricity sector still faces power supply deficits and the progress toward universal electricity access is relatively slow. The country continues to suffer from a significant electricity shortage compelling the state-run power utility to implement load-shedding of 8 to 16 hours per day. Although Liberia has increased installed generation capacity in the past decade, the current electricity supply is still insufficient to meet demand, and persistent outages continue to undermine the country's economic growth and competitiveness. Access expansion has improved, but the pace of rural electrification has stalled in recent years. Between 2012 and 2021, overall access to electricity increased from less than 10 percent to 30 percent, driven by increased access in urban areas (from 16 percent to 50 percent), while access in rural areas expanded at a slower pace (from 3 percent to 8 percent) and remained at 8 percent in 2018-2021.

Liberia's energy sector is constrained by several underlying issues. First, the lack of sufficient generation capacity, particularly during the dry season leads to electricity shortages and unreliability. Second, the operational inefficiencies and weak financial condition of the utility limit the ability of the utility to adequately maintain the existing infrastructure, make additional investments in new generation, transmission, and distribution assets, and attract private investment. Finally, due to weak regulatory enforcement, private sector participation in the energy sector has been limited, further limiting the opportunities for reliable electricity supply and access expansion. We will discuss these underlying issues and conclude with potential options to address them.

FIGURE 9: Access to electricity (% of population), 2012-2021

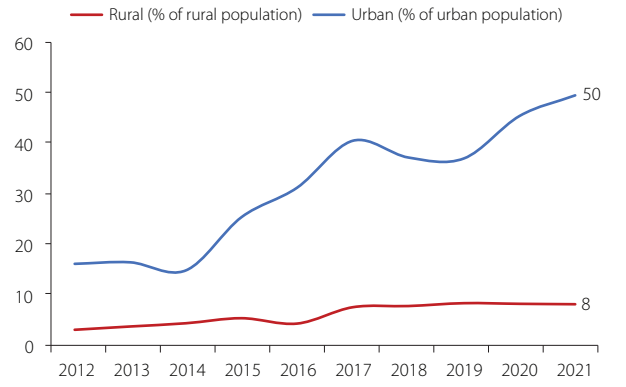
Access to electricity has improved significantly in the last decade…



Source: World Bank, WDI.

FIGURE 10: Access to electricity, urban and rural (% of population), 2012-2021

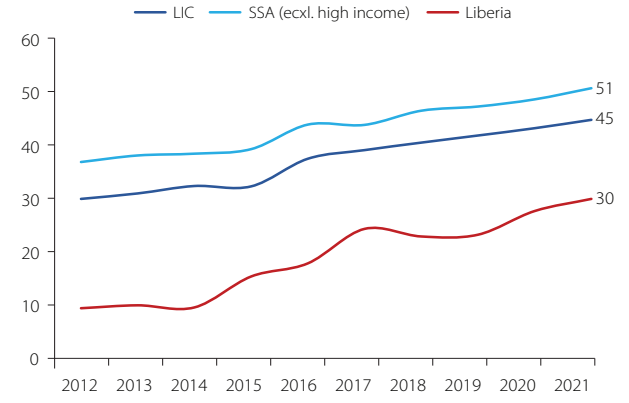
…but rural-urban disparities persist



Source: World Bank, WDI.

FIGURE 11: Access to electricity, Liberia and peers (% of population)

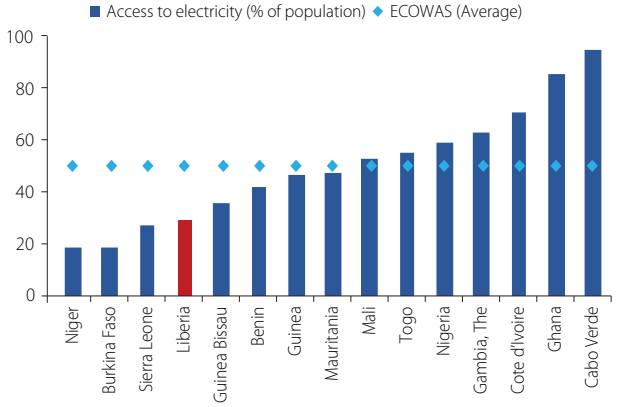
Despite progress, Liberia's electrification rate lags its peers…



Source: World Bank, WDI.

FIGURE 12: Access to electricity, Liberia and West Africa (% of population)

…and is amongst the lowest in West Africa



Source: World Bank, WDI.

2.2 Recent developments in the power sector

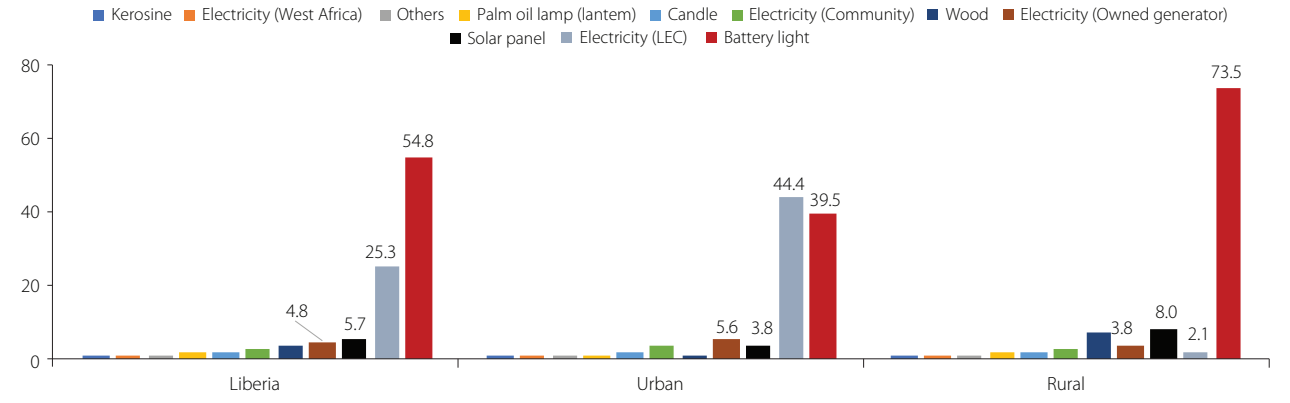
2.2.1 Access to electricity lags, especially in rural areas

Access to electricity has increased significantly in the last decade, but dramatic rural-urban disparities persist. Electrification in Liberia has expanded steadily since 2012, with overall energy access reaching 30 percent in 2021 from under 10 percent in 2012 (Figure 10). The progress on energy access took off in 2016 with the scaling up of the country's generation capacity to 38 megawatts (MW) of thermal energy from 22MW in 2012. With further grid expansion from the rehabilitation of the Mount Coffee Hydropower Plant (MCHPP) in 2017, the national electrification rate has increased significantly. The expansion was driven by steady increases in access in urban areas (from 16 percent to 50 percent), while access in rural areas expanded at a slower pace (from 3 percent to 8 percent) and has stagnated at 8 percent during 2018-2021 (Figure 10).

Despite the improvement in access, Liberia's electrification rate lags its peers. The country's current electrification rate (of 30 percent as of 2021) is significantly lower than the average electrification rates of low-income countries (45 percent) and of Sub-Saharan Africa (51 percent). Liberia stands 10 years behind its peers (Figure 12), and within West Africa, only Sierra Leone (28 percent), Burkina Faso (19 percent) and Niger (19 percent) perform worse (Figure 12).

FIGURE 13: Type of lighting, Liberia by region (% of households)

Most rural households and many urban households depend on battery-powered lighting



Sourrce: Liberia National Housing and Population Census 2022.

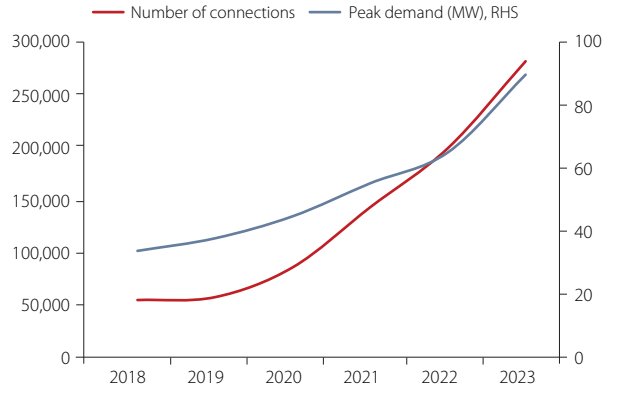
Most grid electricity access is in urban areas, with various off-grid technologies used in both urban and rural areas. Overall, 33 percent of households had access to some source of electricity as of 2022, according to the Liberia census. Approximately a quarter of households reported having access to the national grid while a smaller proportion (7 percent) met their energy needs off-grid, primarily from stand-alone generators and solar photovoltaic systems with varying quality and often at higher cost.[6] Access to grid electricity is mostly concentrated in urban areas (53.7 percent). Another illustration of the dramatic urban-rural divide is the type of lighting used by households. In rural areas, 73.5 percent of households rely on battery-powered lighting while in urban areas, 44.4 percent can use grid electricity for lighting (Figure 14).

2.2.2 Electricity supply has failed to keep pace with steadily rising demand

The demand for electricity in Liberia has increased sharply in recent years and is projected to accelerate in the future. Between 2018 and 2023, the peak demand for grid electricity grew at an average rate of 17.6 percent per year, reaching 90MW in 2023. Continued grid expansion and economic growth are the main drivers of electricity demand. The considerable increase in customer connections to the national grid (of 25.5 percent per year), coupled with the rebound in growth following the pandemic, led to a significant increase in electricity demand in recent years (Figures 15 and 16). In the medium term, electricity demand is expected to keep growing substantially, reaching 227MW by 2026, underpinned by continued expansion in access, rising population (by 2.2 percent per year), and economic growth (of about 6 percent per year).[7] Beyond 2026, power demand is expected to grow at a rate of more than 12 percent per year until 2040.[8]

FIGURE 14: Electrical connections and peak demand (number and MW), 2018-2023

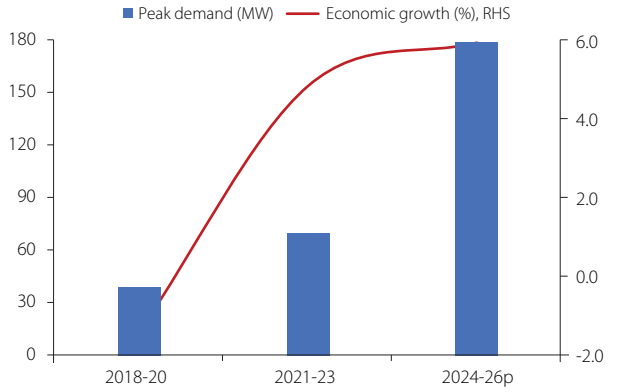
With grid expansion, the demand for electricity has increased significantly…



Source: LEC, WDI, World Bank staff calculations

FIGURE 15: Economic growth and peak demand (% and MW), 2018-2026p

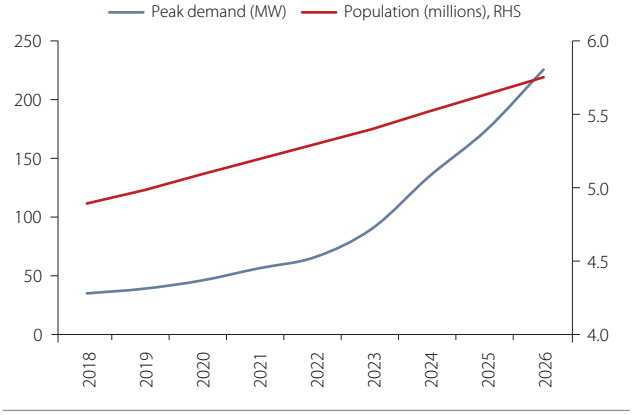
The rebound in growth in recent years also boosted electricity demand in Liberia



Source: LEC, WDI, World Bank staff calculations.

FIGURE 16: Population and peak demand (millions and MW), 2018-2026p

Population growth is expected to drive electricity demand in the medium term



Source: LEC, WDI, World Bank staff calculations

Liberia has made notable progress in scaling up its electricity supply in the last two decades to meet growing demand. Prior to 2017, the national electricity grid was supplied with energy from expensive heavy fuel oil plants with installed generation capacity of up to 38MW. By 2017, Liberia's energy generation capacity had been scaled up to 126MW with the installation of 88MW of hydropower at the Mount Coffee Hydropower Plant. With the expanded generation capacity domestically, energy delivered via the national grid increased significantly, reaching 271.9 gigawatt hours (GWh) in 2022, up from 52.0 GWh in 2014 (Figure 19).

[6] *Liberia National Housing and Population Census 2022.*

[7] *LEC demand forecast (2023).*

[8] *Optimization Study for the Development of Power Generation in Liberia (February 2020).*

FIGURE 17: Liberia: Sources of power supply in 2023

Liberia's largest source of electricity is hydropower . . .

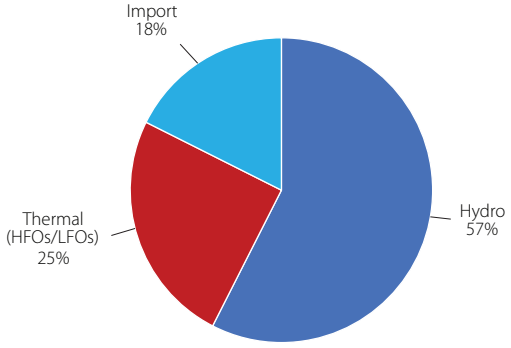
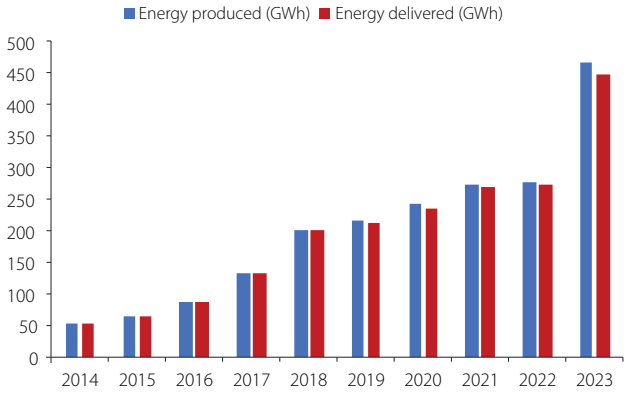


FIGURE 18: Liberia: Electricity production and electricity delivered

. . . and electricity supply has increased more than fivefold in the last decade



Sources: LEC; World Bank staff calculations.
Notes: HFOs=heavy fuel oil plants; LFOs=light fuel oil plants; Hydro=hydropower plants. Energy production includes domestic generation and, from 2023, imported electricity. The difference between energy production and energy delivered is transmission and distribution losses.

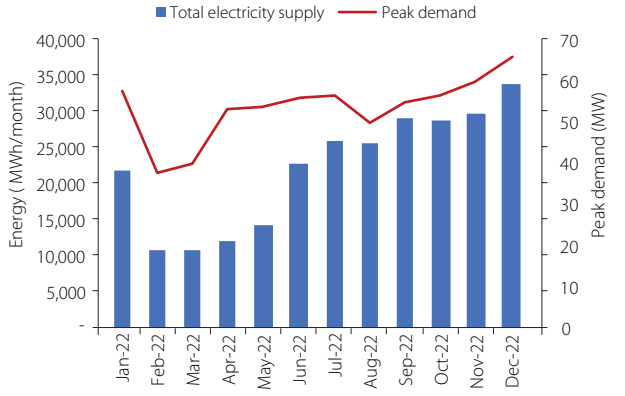
Despite the increase in generation capacity, the power deficit in Liberia remains high, especially during the dry season. In 2023, when peak demand on the national grid was about 90MW, the combined generation capacity of both hydropower and thermal plants had dropped to 47MW[9] during the dry season, resulting in a substantial domestic supply-demand gap. Liberia's hydropower generation which constitutes 70 percent of the energy mix domestically is dependent on sufficient rainfall. When there is lower than average rainfall, particularly during the dry season of January to May, MCHPP generation capacity can fall by 75 percent or more, with only one out of four units available to run at reduced load (Figure 20).

Inadequate and variable supply translates to poor reliability for customers who suffer from frequent outages. Households and businesses connected to the grid continue to face frequent interruptions and long duration of outages. LEC's outages have been increasing since 2018, worsened by power theft and overburdened infrastructure and concentrated in the dry season when hydropower is limited. In 2022, annual outages more than doubled, reaching 423 hours per customer per year, up from 209 hours in 2021 (Figure 21). Households and businesses connected to the grid experienced 25 outages per month lasting 35 hours on average (Figure 21).

To compensate for supply shortages during the dry season, Liberia began to import power in 2023. In 2023, Liberia entered a power purchasing agreement with Cote d'Ivoire, one of the West Africa Power Pool[10] countries, to purchase 27MW to help fill the demand-supply gap,

FIGURE 19: Electricity supply and demand (MWh and MW), monthly 2022

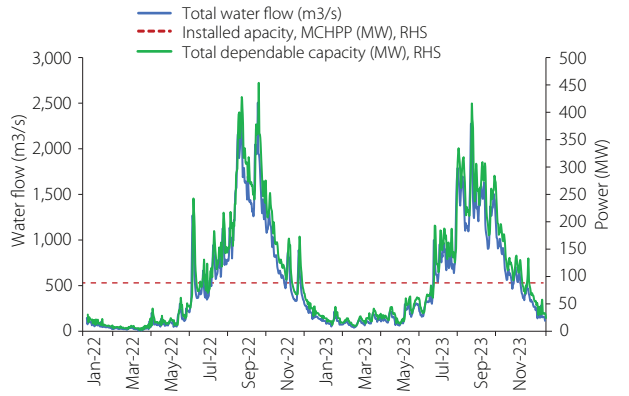
The power deficit remains high as electricity demand exceeds its supply, especially during the dry season…



Source: LEC; World Bank staff calculations.
Note: m3/s = cubic meters per second.

FIGURE 20: Hydropower production: water flow and installed capacity (cubic meters per second, MW), monthly 2022-23

When reduced hydropower production results in electricity supply shortages



Source: LEC; World Bank staff calculations.

[9] *LEC Press Release (May 3, 2023).*
[10] *The West African Power Pool is a cooperation of the national electricity companies in Western Africa to help establish a reliable power grid for the region and a common market for electricity.*

FIGURE 21: Electricity outages, Liberia (annual number per customer), 2018-20

Customer outages soared in 2022…

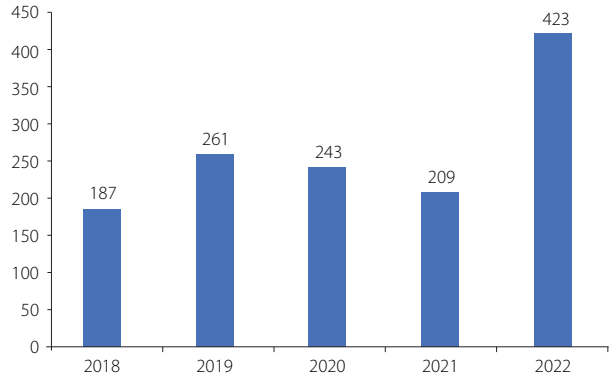
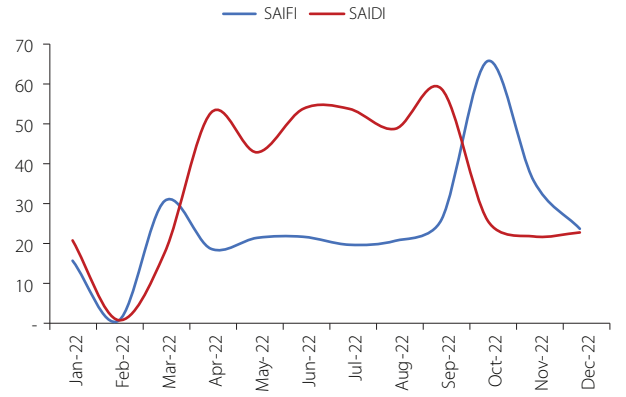


FIGURE 22: System average interruption frequency and duration index (SAIDI and SAIFI), Liberia (hours and number of outages per month), 2022

And the average length of an outage was worst during the dry season



Note: SAIDI is defined as the total number of hours of all customer interruptions in a period as a share of total number of customers connected to the network in the same period. SAIFI is defined as the number of customer interruptions in a period as a share of total customers connected to network in the same period.
Source: Evaluation of Liberia Compact's MCHPP and Capacity Building and Sector Reform (August 2023) https://www.mathematica.org/publications/evaluation-of-the-liberia-compacts-mt-coffee-hydropower-plant ; LEC and World Bank staff calculations.

particularly during the dry season. With the imported electricity, the volume of energy supply nearly doubled in 2023 to 447.2 GWh, compared to 271.9 GWh in 2022. As a result, in 2023, hydropower accounted for 57 percent of Liberia's electricity supply capacity, thermal plants 25 percent, while 18 percent was imported (Figure 18). However, even with these imports, supply could barely meet the country's peak demand of about 90MW. In April 2024, power imports were increased to 50MW during off-peak hours (i.e., from 6 a.m. to 6 p.m.) and 25MW during the peak period (i.e., from 6pm. to 6 a.m.). Nevertheless, electricity shortages have persisted, resulting in protracted load shedding and unplanned blackouts.

2.2.3 Unreliable electricity supply remains a key constraint to growth and competitiveness

Electricity serves as a critical input to the production of goods and services, and power outages weaken firm productivity and limit investments, as shown by evidence across Africa. Reliable and affordable supplies of electricity contribute to a business environment more attractive to private sector investment. It also enables firms to produce at lower costs, enjoy better profit margins, and produce cheaper products to compete in domestic and global markets while generating more local employment, especially in energy-intensive sectors such as manufacturing. An assessment of firm-level data from 29 African countries (including Liberia) suggests that persistent electricity outages undermine the performance of existing firms (i.e., productivity and profits), limit the entry of foreign and domestic firms, and constrain job creation.[11] For every 1.0 percent increase in the frequency of outages experienced by firms, the assessment found that there is a 1.2 percent decline in sales, a 1.3 percent decline in sales per worker, and a 2.3 percent decline in value-added per worker (Figure 23). Using Ghana as a case study, the assessment also found that the number of foreign direct investment projects outside of the energy and construction sectors in the country declined by 12.3 percent per annum during 2013 to 2016, a period characterized by widespread electricity shortages.

FIGURE 23: Electricity outages and firm performance, Africa (% change in sales, sales per worker, and value-added per worker for % change in frequency of outages)

Across Africa, higher power outages weaken the performance of existing firms

Note: Data from 29 SSA countries, including Liberia.
Source: World Bank staff calculations based on data from Mensah, J. T. 2018. "Jobs! Electricity Shortages and Unemployment in Africa." Policy Research Working Paper 8415. World Bank. Washington, DC. and Liberia Green Competitiveness Firm Survey.

[11] *Mensah, J. T. 2018. "Jobs! Electricity Shortages and Unemployment in Africa." Policy Research Working Paper 8415. World Bank. Washington, DC*

Insufficient and unreliable electricity supply tend to undermine business formation in Liberia. Attracting private sector investment into value addition and productive sectors is challenging from the backdrop of frequent electricity outages and or limited supply. A survey of enterprises in Liberia revealed that electricity is the second most binding business environment constraint for firms, and the share of firms faced with this constraint is quite significant compared to peers (Figure 24). The lack of access to reliable energy supply constrains about 23 percent of firms in Liberia compared to an average of 15 percent in low-income countries and 13 percent across SSA. Large firms in Liberia are the hardest hit by inadequate power supply, with 50 percent naming electricity as a major constraint that translates into a loss 4 percent of annual sales on average (Figure 25, Figure 26). Moreover, power outages are commonplace: in the 2017 World Bank Enterprise Survey, firms report experiencing an average of 4.5 power outages each month. With unreliable electricity or with no electricity access at all, firms must invest in expensive off-grid solutions such as diesel generators or solar systems. In the recent Liberia Green Competitiveness Survey, 55 percent of firms report using diesel-backup generators to support their operations (Figure 27). The problem of unreliable electricity supply partly underpins the low business density in Liberia. Liberia has the lowest business density in the world, recording just 73 new limited liability companies in 2022 for a business density of 0.02 (newly registered corporations per 1,000 working-age people). By comparison, Guinea and Ghana have business densities of 0.66 and 1.32 respectively.[12]

FIGURE 24: Firms facing electricity as a major constraint, Libera and peers (%)
Insufficient power supply reduces Liberia's competitiveness…

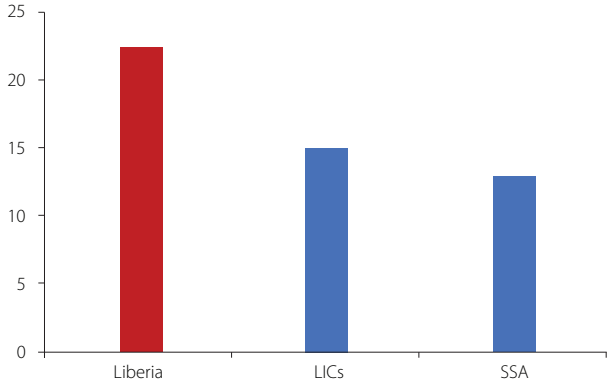


FIGURE 25: Firms facing electricity as a major constraint, Liberia, by firm size (%)
More than half of large firms in Liberia are constrained by insufficient and unreliable power supply …

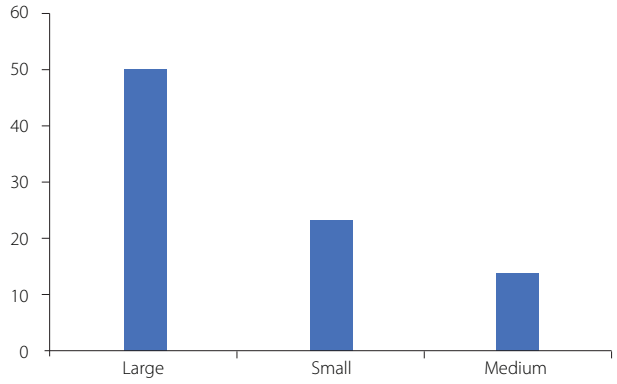


FIGURE 26: Losses due to electrical outages, Liberia, by firm size (% of annual sales)
… with large firms losing greater share of annual sales due to power outages

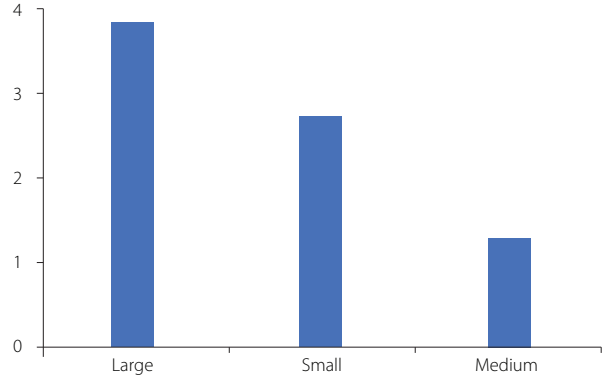
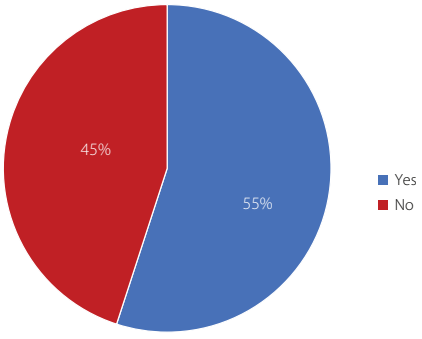


FIGURE 27: Liberia's reliance on backup-diesel generators for operations (% of establishments)
More than half of firms must rely on backup generators to keep in business



Notes: LICs = Low-Income Countries. SSA = Sub-Saharan Africa. Large = 100+ employees. Medium = 20-99 employees. Small = 5-19 employees.
Source: World Bank staff calculations based on World Bank Enterprise Survey 2017; Liberia Green Competitiveness Firm Survey

[12] *World Bank's Entrepreneurship Database (https://www.worldbank.org/en/programs/entrepreneurship)*

2.2.4 Despite tariff cuts, electricity is expensive for Liberia's consumers, but revenue collection has recently improved

Liberia has reduced the electricity tariff several times in the last decade, but the country still has one of the highest electricity tariffs in West Africa. Following the addition of low-cost hydropower generation to Liberia's electricity supply, the standard tariff was reduced from US$0.52 per kilowatt hour (kWh) to US$0.40 per kWh in 2017 and US$0.35 per kWh in 2018.[13] In 2022, a new end-user tariff structure was introduced, with rates for residential customers and a social tariff to lower energy bills for poorer households as well as rates for non-residential customers and medium-voltage customers such as industrial plants that use high amounts of power (Figure 29). The electricity tariff was reduced to US$0.24 per kWh for residential customers, with a social tariff of US$0.15. Non-residential customers were to pay US$0.22, and medium-voltage users received a rate of US$0.19. Despite these cuts in price, with an average tariff of US$0.20 per kWh, Liberia's cost of electricity stands well above the tariffs elsewhere in West Africa (Figure 28).

As tariffs were cut but electricity supply expanded, revenue collection improved, likely assisted by stronger enforcement against power theft. The impact of the new tariff structure on revenues is complex, and data is limited. Two-thirds of connected customers are residential, and close to one-third are eligible for social tariffs. Only 3 percent of connected customers are non-residential and medium-voltage subscribers, but these are likely very large users.[14] Tariff cuts in 2022 were followed by rapid expansion of electricity supply in 2023. At the same time, enforcement against power theft was ramped up. The joint impacts of these factors can be seen in the behavior of revenue. Between 2022 and 2023, the amount of electricity supplied rose by 64.4 percent in GWh terms, and revenues rose by 110.1 percent in US$ terms. In 2023, for the first time, the value of revenue (US$55 million) exceeded the amount lost through theft (U$47 million). Most importantly, revenue collected per GWh, which weakened from US$0.11 million in 2021 to US$0.10 million in 2022, increased in 2023 to US$0.12 million. Further reduction in commercial losses could help enhance revenue mobilization and improve the financial condition of the LEC at the current tariff.

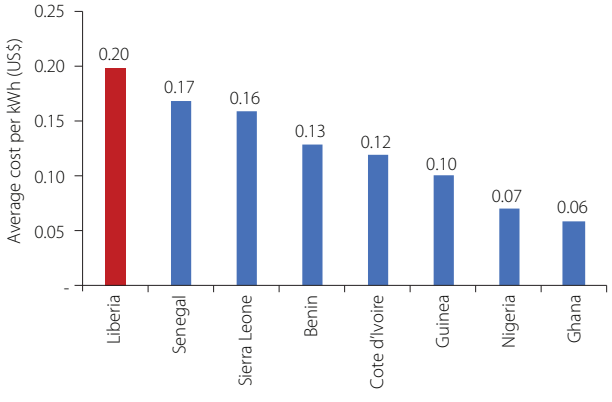
2.3 Factors holding back the electricity sector in Liberia

2.3.1 Lack of sufficient generation capacity

The lack of sufficient generation capacity is amongst the major factors limiting the electricity sector in Liberia. While Liberia has made strides in scaling up electricity generation in the last decade, the country's current generation capacity is insufficient to meet the growing demand for electricity. In addition, reduced hydropower generation during the dry season further limits Liberia's current generation capacity. In 2023, the country's dependable generation capacity, i.e., hydropower and thermal, particularly during the dry season was well below the full installed generation capacity of 126MW

FIGURE 28: Electricity tariff in selected countries in West Africa (average cost per kWh in US$)

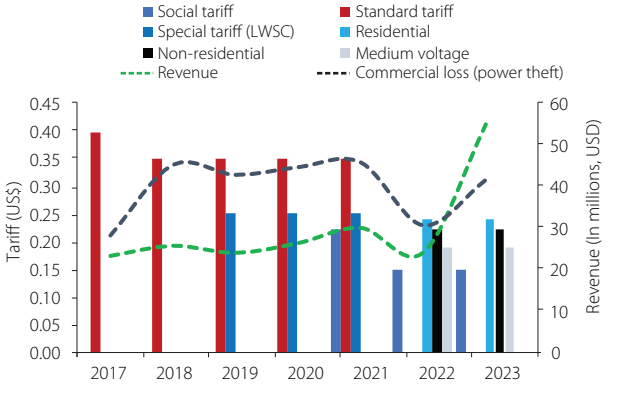
The price charged for electricity in Liberia remains well above that in its neighbors



Source: Evaluation of Liberia Compact's MCHPP and Capacity Building and Sector Reform (August 2023)

FIGURE 29: Tariffs, revenue, and losses (in US$ and US$ millions), 2017-2023

With the reduction in tariffs while supply is expanding, rising revenue outpaces losses from power theft



Source: LEC and World Bank staff calculation

[13] *In addition, a special tariff of US$0.25 per kWh was introduced in 2019 for the Liberia Water and Sewer Corporation in support of the water sector.*

[14] *Electricity usage by customer type is not available, but in Africa overall, the International Energy Agency reports (based on 35 reporting countries) that in 2021 industry used 37 percent of electricity and residential customers used 36 percent, with commercial and public services consuming 19 percent. https://www.iea.org/regions/Africa/electricity.*

and could only meet half of the estimated peak demand. This situation often poses enormous challenge for both the utility and consumers. It tends to drive electricity shortages, unreliable electricity supply, excessive cost of generation for the utility considering the relatively prohibitive cost of thermal generation, and undermines efforts aimed at providing access to affordable and reliable electricity for households and firms.

2.3.2 Operational inefficiency and weak financial performance of the power utility

Operational inefficiency and weak financial performance undermine the ability of the state-run power utility to provide enough electricity. LEC has consistently incurred large financial losses due to operational inefficiencies but has been working to stamp out power theft.[15] In the last decade, LEC received revenue for only 46 percent of the electricity supplied per year owing to high distribution losses. For instance, in 2023, out of 447 GWh of electricity supplied, the LEC billed or sold 240GWh, representing a total loss of 207 GWh (or 46 percent of the electricity supplied). Consequently, the utility's operating losses climbed from US$12 million (0.4 percent of GDP) in 2019 to US$28 million (about 0.7 percent of GDP) in 2022 as the gap between revenues and operating costs expanded, before falling to about US$15 million (0.3 percent of GDP) in 2023 as the utility stepped up efforts to stamp out power theft and reduce its commercial losses. Commercial losses driven largely by power theft or illegal connections increased from 14 percent of electricity supplied in 2014 to a peak of 55 percent in 2019 before falling steadily reaching 31 percent in 2023 as the LEC regularized more than fifty thousand unauthorized and illegal connections to the electric network through its anti-power theft enforcement exercise, robust customer service, and metering. Technical losses increased from 12 percent in 2014 to 15 percent in 2021 and stagnated over the last three years. By 2023, while the total distribution losses (technical and commercial) were down to 46 percent, from 56 percent in 2022, they amounted to about US$47 million in monetary terms with commercial losses[16] accounting for 68 percent and technical losses accounting for the remaining 32 percent.

Ongoing commercial losses have contributed to rising LEC liabilities, partly due to bills for imported power. As of end-December 2022, LEC's total debt stood at US$619.3 million (15.6 percent of GDP), up from US$591.3 million (14.9 percent of GDP) at the start of the year, an increase of US$27.9 million (0.7 percent of GDP).[17] While long-term liabilities account for a considerable proportion of the utility's debt (91 percent), current liabilities are growing rapidly as the utility grapples with low revenue and high cost of operations. The utility's current liabilities increased by 19 percent during 2022, from a stock of US46.0 million (1.2 percent of GDP) to US$54.5 million (1.4 percent of GDP). The cost of imported power is also beginning to weigh on LEC's financial health: as of January 2024, LEC cross-border

FIGURE 30: LEC profit/loss, revenue, and operating cost (US$ million), 2019-2023

LEC has consistently incurred large financial losses…

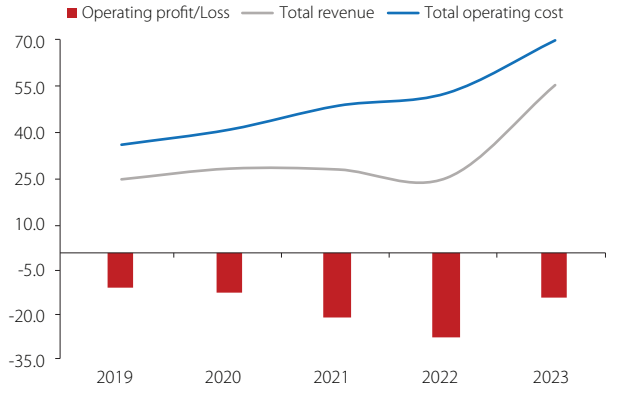
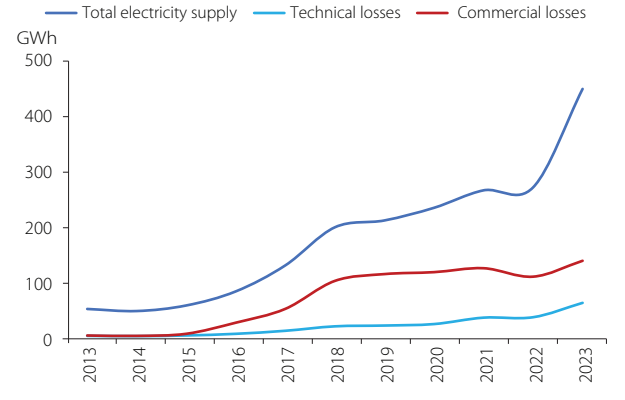


FIGURE 31: Electricity supply, technical losses, and commercial losses (GWh), 2013-2023

…driven by the utility's operating inefficiencies.



Source: LEC, Liberia State-owned Enterprise Budget Annex (2024), and World Bank staff calculations

[15] *This analysis is based on LEC's Presentation at the 2024 Energy Roundtable and Liberia 2024 State-owned Enterprise Budget Annex.*

[16] *Losses related to power theft, non-metering of customers, and other inefficiencies.*

[17] *LEC Administrative data (2022).*

legacy debt owed to Cote d'Ivoire Energies was US$8.4 million while its power purchase arrears were at US$2.6 million.[18]

Inefficiencies in LEC's operations and the utility's high debt levels pose a significant fiscal risk and hinder LEC's ability to provide adequate electricity infrastructure. LEC's inability to cover its operating costs and settle legacy arrears due to perennial losses presents a significant fiscal burden for government. In 2023, with LEC's delayed payments preventing much-needed electricity imports, the government stepped in to assist, providing US$12 million (0.3 percent of GDP) to settle LEC's cross-border legacy debt and arrears on power purchase and transmission service agreements. In addition, LEC's long-term liabilities are mainly publicly guaranteed debt owed to multilateral development banks, making them contingent liabilities of the government. Importantly, despite government assistance, insufficient revenues and high debt level continues to limit the fiscal space of the LEC and hinder the utility's ability to adequately maintain existing infrastructure; make additional investments in new generation, and transmission assets; and attract private investment to support the government's national electrification agenda and help bridge the current demand-supply gap.

2.3.3 Limited private sector participation

Despite legal and regulatory reform, private sector participation in Liberia's power sector remains low. In 2015, the government took steps to liberalize the power sector and encourage private sector participation. Through the enactment of the 2015 Electricity Law and the subsequent establishment of an independent regulatory institution, Liberia has embarked on reforms to enable private sector participation in the power sector. The government has since issued several instruments to improve governance including regulations on administrative procedures, electricity licensing, micro utility licensing, tariffs, and customer service and quality of supply. Meanwhile, activities in the power sector remain largely driven by government entities: the Liberia Electricity Corporation is the national grid company and transmission system operator responsible for power generation, transmission, and distribution while the Rural and Renewable Energy Agency is responsible for the development and supply of modern energy products and services to rural areas with emphasis on locally available renewable resources.

The private sector is not yet an important contributor to Liberia's power sector, however, it could play a critical role in off-grid access expansion. Despite the progress on laws and regulations to modernize the structure of Liberia's electricity sector, private sector participation has lagged. Liberia's electricity sector continues to be dominated by the state-run utility and characterized by a host of unregulated small operators and a few large private sector operators. To date, the Liberia Electricity Regulatory Commission (LERC), the independent regulatory institution, has licensed only two private sector operators: Jungle Energy Power (JEP) and Totota Electric Cooperative. JEP currently operates and maintains the cross-border electric network in Nimba County, engaged in distribution, trading, and import of electricity from neighboring Cote d'Ivoire with customer connections of 8,134 in 2022 while TEC operates a solar-diesel hybrid generation system with available capacity of about 63kW and customer connections of 376 in rural Liberia. Together, JEP and TEC accounted for only 4 percent of the total customers connection and about 10 percent of electricity sold by operators in the energy sector in 2022.[19] Leveraging private sector participation could help scale up off-grid access expansion, particularly through transmission and distribution, but also generation.

Notably, Liberia has made a relatively good progress on regulatory reform within Sub-Saharan Africa, but the capacity to enforce regulation remains weak. In 2022, Liberia ranked tenth in Africa following improvement in the country's Electricity Regulatory Index.[20] The adoption of regulatory reform under the 2015 Electricity Law that saw the establishment of an independent regulatory institution, the LERC, was critical. However, the LERC's capacity to enforce the existing regulatory framework is weak. For instance, the LERC conducted a national census of electricity operators in 2019, listing 345 private sector electricity operators, but it lacks the resources to license, monitor, and enforce compliance with regulations and laws.[21] The LERC relies on revenues from regulatory fees from licensed operators and levies on licenses that are often not sufficient to facilitate its regulatory functions.

[18] *LEC's presentation at Liberia Energy Roundtable (March 2024).*

[19] *National Census of Electricity Operators (August 2019); LERC Annual Report 2022 and World Bank staff calculations.*

[20] *See p. 10 in Electricity Regulatory Index for Africa 2022 (ERI), Africa Energy Portal, African Development Bank, February 2023. https://africa-energy-portal.org/reports/electricity-regulatory-index-africa-2022-eri*

[21] *Millennium Challenge Corporation (2023), "Increasing Access to Reliable Electricity in Liberia," MCC Evaluation Brief (August 2023). https://www.mcc.gov/resources/doc/evalbrief-090623-lbr-mt-coffee/*

2.4 Pathways towards sustainable, reliable, affordable, and universal electricity access

2.4.1 Liberia needs a robust electrification strategy

National electrification planning is a fundamental step to addressing the challenges in the power sector. Liberia has a nascent power sector to attract private investment with proper planning and coordination among the various stakeholders. In 2016, the Rural Energy Strategy and Master Plan (RESMP) for Liberia until 2030 was adopted, targeting an electrification rate of 35 percent of the population outside of Monrovia. The RESMP identified five programs for rural electrification with specific targets and investment needs, with a total of US$ 746 million. In 2020, a discussion emerged among the energy stakeholders about developing Liberia's National Electrification Strategy using the Geospatial Planning platform. These strategic planning documents need to be merged and updated through coordinated stakeholders' engagements to reflect the current challenges in the power sector and adopt realistic targets and action plans based on resource availability in achieving the short-medium and long-term goals for energy access.

Rural electrification using off-grid technology would also be critical for the national energy access strategy and power sector development. The Rural Energy Strategy and Master Plan sets an ambitious target of 100 percent solar photovoltaic (PV) off-grid solutions for health, education, and security facilities and electrification of 75 rural settlements where the grid is not expected before 2025. While these targets are seemingly unattainable by 2025, they could certainly be reassessed and pursued over the medium-term. Liberia has a strong market potential for standalone solar home systems with a target of 820,000 households. Development partners have stimulated off-grid solutions, including solar home systems and mini-grids for rural electrification, using innovative business models and financing mechanisms such as result-based financing and grants to leverage private capital. The Government for its part has maintained tariff exemption on off-grid solar renewable energy products since 2022 and developed a policy framework on mini-grid and technical regulation for solar energy products. Currently, there are more than 20 local companies trading solar PV products in Liberia. Further investments in the off-grid technology space would be critical for Liberia's rural energy access and overall electrification agenda through 2030.

While some progress on off-grid electrification has been achieved, active donors' coordination and policy measures are needed to accelerate the growth at scale. As the main proponent of rural electrification, effective donor coordination remains critical to avoid the duplication of investments and market distortion. While the government's role of creating the enabling environment for rural electrification remains imperative, targeted policy and regulatory outcomes, updating and monitoring national strategy and seamless coordination among donors to adopt and execute reforms are fundamental to achieving the off-grid energy access agenda.

2.4.2 Bolstering the operational efficiency and financial viability of LEC

There is an urgent need to implement a strategy with well sequenced and binding steps to reduce LEC's commercial losses. Ramping up the battle against power theft would be an important first step to improve the operational efficiency of the power utility and enhance its financial viability. The Government has taken some bold steps by criminalizing power theft, with positive impacts on LEC's finances, but more needs to be done. In 2023, for instance, the signaling by government and routine enforcement saw a considerable reduction in the share of commercial losses to 31 percent of total supply, down from 41 percent in 2022, but this level is still too high, at around US$32 million in uncollected revenue (equivalent to 0.7 percent of GDP).[22] Further reduction in commercial losses would help enhance the utility's financial viability to enhance generation or increase power purchases, improve reliability, and expand grid access.

Development partners' concerted engagements with the Government are integral to facilitating and sustaining the utility's financial sustainability and private sector investment in the power sector. Since 2006, both multilateral and bilateral development partners have played a significant role in the power sector of Liberia, including active dialogue with the Government; investing in generation, transmission, and distribution assets; supporting the sector reforms; facilitating capacity building; institutional strengthening; and creating the enabling environment for private sector

[22] *World Bank staff estimates using LEC administrative data and average tariff.*

participation. However, the sector has been constrained by commercial losses primarily due to power theft and perennial dry-season power deficit. While initial investments to boost the revenue protection program are being instituted, performance monitoring of the governance and management issues at LEC, including transparency and accountability, are among the critical paths toward the financial sustainability of the utility. With its capital investment, stronger coordination among the development partners can stimulate the sector reforms that will unlock private capital while engaging the financial turnaround of the utility.

2.4.3 Strengthening policy and regulatory framework to promote private sector participation

Strengthening the policy and regulatory framework to encourage private sector participation, particularly in the generation value chain, will be critical. A framework that supports unbundling of activities in the power sector and encourages private sector investment would complement government efforts, not just in scaling up investments in the sector but improving efficiencies along the energy value chain. It is imperative to attract private sector investment in the power generation space to address the persistent dry season power deficit, particularly by utilizing hydropower and solar energy sources. In the short term, public investments in critical infrastructure would create the enabling environment for private investment in generation projects in the medium to long term. By drawing on experiences from other countries and implementing tailored and innovative business models, Liberia has the potential to attract private investments in the energy generation sector effectively. However, for private investments to occur, the financial stability of the utility is crucial, alongside reforms within the power sector, improvements in the regulatory environment, and the establishment of supportive policies and laws.

2.4.4 Accelerating the implementation of new energy projects

A focus on accelerating the implementation of critical energy projects from now to 2030 would help boost Liberia generation capacity and accelerate its electrification agenda while reducing its reliance on expensive power purchase agreements and thermal generation. Imported power presents an opportunity to fill the supply gap, particularly during the dry season, but investment in infrastructure and least cost power generation assets offers a sustainable solution to Liberia's energy problem. A shift from high-cost fossil fuel generation, which accounts for a third of the country's installed generation capacity, to environmentally friendly renewable energy sources will accelerate the government's efforts towards reliable and affordable energy access, reduce operating and transaction costs of domestic firms, boost competitiveness, and create an enabling condition for growth and improving development outcomes.

Harnessing the renewable energy potential of Liberia sustainably will boost the domestic power supply and facilitate regional electricity trade. The hydropower potential in Liberia is approximately 2300 MW across the major rivers in the country. Due to the country's topography (relatively low land) and safeguard issues, hydropower development requires huge investment capital, but the operation cost is highly economical compared to thermal plants. The country demonstrated its prospect to contribute to the regional electricity market through the development of the hydropower power potential. In 2022, LEC exported surplus electricity from the Mt. Coffee hydropower plant via the West African Power Pool's CLSG (Côte d'Ivoire, Liberia, Sierra Leone, and Guinea) interconnection and received US $471,193 as the net income from trades to offset arrears with Côte D'Ivoire. The development of the 150MW St. Paul Two (2) hydropower project will become a game-changer in the power sector of Liberia to facilitate the regional electricity market. Due to the seasonality of hydropower resources, optimally designing hydropower projects with solar PV development will enable a balance of power supply yearly. The climatic conditions of Liberia are favorable for harnessing solar resources for power generation. The country has a high and consistent average level of 1,712 kWh/m^2/year and the potential for generation of 1,400 to 1,500 kWh/kWp. Overall, solar-hydro hybridization will be the optimal approach for integrated renewable power development in Liberia.

BIBLIOGRAPHY

Candace Miller, P. A. (2023). Evaluation of the Liberia Compact's Mt. Coffee Hydropower Plant Rehabilitation and Capacity Building and Sector Reform: Findings from the Final Round. Retrieved May 2024, from https://www.mathematica.org/publications/evaluation-of-the-liberia-compacts-mt-coffee-hydropower-plant

Energy Access Targets Working Group. (2016). More Than a Lightbulb: Five Recommendations to Make Modern Energy Access Meaningful for People and Prosperity. Washington: Center for Global Development. Retrieved April 2024, from www.cgdev.org/node/3124016

IEA. (2023). World Energy Outlook 2023. Paris: IEA. Retrieved from https://www.iea.org/reports/world-energy-outlook-2023

Liberia Electricity Corporation. (January 2022). Summary of Approved Tariff Structure. Monrovia, Liberia. Retrieved April 2024, from https://lecliberia.com/news-releases/the-new-approved-tariff-structure/

Liberia Netherlands Business and Culture Council. (March 2018). Sector Scan: The Energy Sector in Liberia. Monrovia, Liberia: Netherlans Entreprise Agency. Retrieved April 2024, from https://www.rvo.nl/sites/default/files/2018/07/Sector-Scan-Liberia-Energy.pdf

LISGIS. (2023). 2022 Liberia Population and Housing Census Final Results. Monrovia, Liberia: Liberia Institute of Statistics and Geo-Information Services. Retrieved May 2024, from https://www.lisgis.gov.lr/document/LiberiaCensus2022Report.pdf

Ministry of Finance and Development Planning. (2024). Liberia Tax Expenditure Report (FY2018 - 2021). Retrieved May 2024, from https://www.mfdp.gov.lr/index.php/docs/publications/publications/liberia-tax-expenditure-report-fy2018-2021

RREA. (2016). Rural Energy Strategy and Master Plan for Liberia Until 2030. Retrieved May 2024, from https://gestoenergy.com/wp-content/uploads/2018/04/liberia-rural-energy-strategy-and-master-plan.pdf

Sherif, O. V. (2020). Review and Recommendations for Renewable Energy Policies and Regulations to Promote Private Investment in Liberia. International Journal of Science and Research.

USAID. (October 2020). Off-Grid Soalr Market Assessment. Power Africa Off-grid Project. Retrieved from https://www.usaid.gov/sites/default/files/2022-05/PAOP-Liberia-MarketAssessment-508-final.pdf

World Bank. (2017). Enterprise Surveys, Liberia (2017). The World Bank Group. Retrieved April 2024, from www.enterprisesurveys.org

World Bank. (2023). Liberia Poverty Assessment 2016 – Towards a more inclusive Liberia. Washington, D.C.: World Bank Group. Retrieved from http://documents.worldbank.org/curated/en/099032124150035378/P17739418373d30c419ffb1cd3dd5dfb684

World Bank. (2024). Commodity Markets Outlook, April 2024. Washington, D.C.: World Bank. License: Creative Commons Attribution CC BY 3.0 IGO. Retrieved May 2024, from https://openknowledge.worldbank.org/server/api/core/bitstreams/10913920-7b3d-4323-8ccc-43e764336dd2/content

World Bank. (2024). Macro Poverty Outlook for Liberia : April 2024 (English). Macro Poverty Outlook (MPO). Washington, D.C.: World Bank Group. Retrieved from http://documents.worldbank.org/curated/en/099528504052436718/IDU18e70221c1166d14ea41a09f11db652967b9b

World Bank. (2024). Global Economic Prospects, January 2024. Washington, DC: World Bank. doi:10.1596/978-1-4648-2017-5. License: Creative Commons Attribution CC BY 3.0 IGO.

Yusuf, A. A., Kesselly, H. F., Nippae, A., Asumana, C., Kakulu, M. O., Sinneh, I. S., . . . Mayango, R. B. (2024, January). A comprehensive review of Liberia's energy scenario: Advancing energy access, sustainability, and policy implications. Energy Strategy Reviews, 51(101295). Retrieved April 2024, from https://www.sciencedirect.com/science/article/pii/S2211467X24000026

ANNEX

Table A1: Liberia: Selected economic indicators

	2020	2021	2022	2023	2024f
(Annual percentage change)					
Real sector					
Real GDP growth (annual percentage change)	-3.0	5.0	4.8	4.7	5.3
Mining	2.0	17.6	14.0	5.7	5.1
Non-mining	-3.2	4.3	3.8	4.2	5.3
Inflation					-
Consumer prices (annual average)	17.4	7.9	7.6	10.1	7.7
Consumer prices (end of period)	13.1	5.5	9.2	10.0	5.4
(Percent of GDP)					
Central government operations					
Total revenue and grants	31.3	27.3	21.6	21.3	22.3
Domestic revenue	16.0	16.4	15.3	14.5	16.1
Tax revenue	13.0	13.8	12.3	12.2	12.8
Nontax revenue	3.0	2.6	3.0	2.4	3.3
Grants	15.3	10.9	6.3	6.8	7.7
Total expenditure	35.1	29.7	27.2	27.3	25.4
Current expenditure	24.5	21.9	21.0	19.3	17.6
Compensation of employees	10.9	8.5	7.5	7.0	7.0
Goods and services	11.2	10.2	9.7	9.1	8.0
Interest payments	1.3	0.9	1.0	0.9	1.2
Subsidies and grants	1.0	2.1	2.3	2.0	2.3
Social benefits	0.1	0.2	0.5	0.4	0.6
Capital expenditures	10.6	7.8	6.2	8.0	7.8
Overall balance	-3.8	-2.4	-5.6	-6.1	-3.0
Primary balance	-2.6	-1.5	-4.7	-5.1	-1.9
Memo:					
Total public debt	58.7	53.3	55.4	57.5	57.2
External debt	41.1	37.2	37.2	38.4	38.8
Nominal GDP	3,037.0	3,509.0	3,974.0	4,332.3	4,630.3

Source: Liberian authorities, IMF, World Bank staff estimates (April 2024)


WORLD BANK GROUP
Macroeconomics, Trade & Investment