



Program Information Document (PID)

Concept Stage | Date Prepared/Updated: 08-Jun-2023 | Report No: PIDC269223

**BASIC INFORMATION****A. Basic Program Data**

Country Zambia	Project ID P179380	Parent Project ID (if any)	Program Name National Energy Access and Transformation Program
Region EASTERN AND SOUTHERN AFRICA	Estimated Appraisal Date 19-Sep-2023	Estimated Board Date 30-Nov-2023	Does this operation have an IPF component? No
Financing Instrument Program-for-Results Financing	Borrower(s) Ministry of Finance	Implementing Agency ZESCO, Rural Electrification Authority	Practice Area (Lead) Energy & Extractives

Proposed Program Development Objective(s)

To expand access to electricity in target areas and improve financial sustainability of the sector.

COST & FINANCING**SUMMARY (USD Millions)**

Government program Cost	405.00
Total Operation Cost	80.00
Total Program Cost	80.00
Total Financing	80.00
Financing Gap	0.00

FINANCING (USD Millions)

Total World Bank Group Financing	60.00
World Bank Lending	60.00
Total Non-World Bank Group and Non-Client Government Financing	20.00



Multilateral and Bilateral Financing (Concessional)

20.00

Concept Review Decision

The review did authorize the preparation to continue

B. Introduction and Context

Country Context

- Zambia is a landlocked, resource rich, sparsely populated country at the heart of Southern Africa.** The country has a total area of 752,614 square kilometers, making it the 39th largest country in the world. The country population has increased from approximately 10.3 million in 1990 to 19.6 million in 2022 and population growth over the past three years has averaged over four percent according to Government census figures. Today, Zambia is one of the least densely populated countries in Africa, with a population density of just 25 people per square kilometer.
- The country is facing serious macroeconomic challenges driven mainly by huge and unsustainable external public debt.** External debt increased significantly following the debt cancellation associated with the country's Highly Indebted Poor Countries completion point achieved in April 2005, and reached 111.8 percent of GDP in 2020, up from 63.7 percent in 2015. This increase in debt was enabled by weak fiscal discipline and driven by costly infrastructure investments, declining copper prices, and declines in agricultural output due to rainfall variability. The COVID-19 pandemic then pushed the economy into contraction. The economy declined by 2.8 percent in 2020, the first recession for Zambia since 1998. Inflation reached a high of 22 percent in 2021, driven by COVID-related lockdown measures and depreciation of the Kwacha. The resulting decline in per capita income to US\$1,040 eventually led to the reclassification of Zambia as a low-income country in 2022.
- Government is committed to addressing macroeconomic instability, restore fiscal credibility, tackle growing governance concerns, and return the country to economic growth.** In December 2021, Zambia and the International Monetary Fund (IMF) reached a staff level agreement for a US\$1.3 billion Extended Credit Facility (ECF) from the under which the Government committed to restoring macroeconomic stability and fiscal discipline to support resilient and inclusive growth. The IMF program was approved in August 2022 and followed in October 2022 by a complementary US\$275 million Bank-financed Development Policy Operation. The ongoing fiscal adjustment requires a combination of expenditure rationalization, reforms to strengthen overall fiscal management, and tackling inefficient public investment programs and wasteful subsidies (agriculture and energy), towards greater investment in health and education, delivery of social safety nets, and growth and job creation expenditures while generating economic growth for greater revenue mobilization. In view of the economic transformation agenda, the GDP is projected to grow by 3.7 percent in 2023 and 4.4 percent in 2024.
- Access to electricity is central to Zambia's future both because of the economic development it enables and because of its importance to social welfare.** Despite progress in recent years, especially off-grid, the country's electrification rate remains just 42 percent¹, below the Sub-Saharan Africa average of 47 percent. This overall rate does not capture the full story however: while over 75 percent of urban households have access to electricity – almost exclusively

¹ World Bank Group. (2018). Zambia – Beyond Connections: Energy Access Diagnostic Report Based on the Multi-Tier Framework. Washington, D.C.: World Bank Group.



through the grid – less than 12 percent of rural households have access to any kind of electricity source. Off-grid electrification plays an increasingly significant role in this regard as it provides 85 percent of the access in rural areas, predominantly through solar lanterns but also through rechargeable batteries, solar homes systems, and diesel generators.

Sectoral (or multi-sectoral) and Institutional Context of the Program

5. **With approximately 95% of energy produced by hydropower plants, the country's security of supply is highly exposed to climate-related shocks, the volatility and frequency of which have increased in recent years.** Zambia experienced significant droughts in the 2015-16 and 2018-19 seasons resulting in shortfalls of up to 25% of its power needs and extensive load-shedding throughout the country. The events surrounding 2015-2016 drought revealed underlying sector weaknesses and triggered a collapse in the financial performance of state-owned utility ZESCO Limited (ZESCO), followed by a rapid accumulation of short-term arrears in addition to growing long-term debt.
6. **The country's macroeconomic stability and economic turnaround depends on successfully catalyzing new growth in key sectors including mining, agriculture, manufacturing, and tourism for which energy remains the binding constraint.** Despite considerable hydropower, coal, solar, and wind resources in the country, ZESCO has struggled to meet the Zambia's growing demand for electricity in recent years due to insufficient investment in new power projects and the country's historical reliance on hydroelectric power. ZESCO's financial challenges that have persisted and grown in recent years, with its debt ballooning from approximately US\$700 million in 2011 to US\$3 billion today has led to insufficient investment in new power projects.
7. **Recognizing ZESCO's unsustainable trajectory and the rising risks to Zambia's growth, Government has identified the need for increased investment in the energy sector as a priority and has launched an ambitious program of reforms to achieve this.** In the medium term, Government expects these reforms to return the sector to viability so that it is no longer a fiscal drag, able to attract private sector investment at scale and a high-growth trajectory of the broader economy and deliver on its promise of more inclusive electrification across the country. ZESCO, on its part, has begun the implementation of several measures across the five focus areas of customer satisfaction, financial sustainability, expanded infrastructure, effective maintenance, and optimized human capital.
8. **Government has also committed to achieving universal access through its Vision 2030 and is making strides in increasing access.** Measures implemented by the Government include the approval in 2022 of a Bank-financed least cost geospatial electrification plan (a key input into the IRP), doubling of the financing allocated to the Rural Electrification Authority in the national budget, the preparation of REA's new Strategic Plan for the 2023-2026, and the implementation of several electrification initiatives including the Bank-financed Electricity Service Access Project (ESAP - P162760). Building on the Bank's previous energy sector financing for access in the country, including the Increased Access to Electricity Services Project (IAES – P077452) and the Lusaka Transmission and Distribution Rehabilitation Project (LTDRP – P133184), ESAP has been central to Government's access efforts: capitalizing on REA and ZESCO's respective comparative advantages, the project has financed the roll-out of a grid connection subsidy program in rural areas leading to the connection of over 280,000 people and business (with another 40,000 expected before closure), financed the construction of 370 km of grid extensions (with a further 130 km expected), supported the creation of a US\$2.5 million line of credit for off-grid developers and distributors, as well as launched an innovative off-grid smart subsidy scheme to incentivize the expansion of energy service providers in rural areas.



Relationship to CAS/CPF

1. **The proposed Program is aligned with the Zambia Country Partnership Framework (CPF) FY2019-2023 that is in the process of being extended to FY2024.** The overarching goal of the CPF is the diversification of Zambia’s economy so that it is more resilient and inclusive. The two revised focus areas for the CPF extension are: (i) increased resilience of rural households; and (ii) better job prospects especially for under-employed groups (including youth as well as women and girls).
2. **The proposed Program is also aligned with other World Bank Group (WBG) higher level objectives, including:**
 - a. The **twin goals:** By enabling ZESCO to provide reliable and affordable electricity without compromising its financial performance, the Program contributes to reducing poverty and increasing shared prosperity.
 - b. The **UN Sustainable Development Goals (SDGs):** By moving the country towards universal access to electricity by 2030, the Program contributes directly to SDG7.
 - c. The **Maximizing Finance for Development** agenda: By improving moving ZESCO towards improved creditworthiness and supporting competitive procurement, the Program strengthens the enabling framework for private sector participation in renewable energy generation and sector expansion.
 - d. The **WBG Green, Resilient, and Inclusive Development (GRID)** approach: The Program falls under the “Rebuilding Better” phase activities of the Bank’s Zambia engagement following the COVID-19 pandemic.
 - e. The new **WBG Gender Strategy (FY24-30)**. The MPA will contribute to narrowing of gender gaps by elevating human capital and incorporating measures to mitigate gender-based violence in project activities; creating, expanding, and enabling opportunities for inclusive economic participation through women’s employment in the energy sector; increasing productivity of women-led enterprises; and creating opportunities to engage women as leaders in the energy sector.

Rationale for Bank Engagement and Choice of Financing Instrument

9. **The Bank is supporting Zambia to achieve universal access to electricity by supporting transformation of ZESCO into a solvent and operational efficient utility so that the country can attract public and private investment in the sector to increase the power supply and support economic growth while delivering expanded access to electricity.** ZESCO is by far the largest off-taker and supplier of power in the country, yet it is currently unable to attract private sector investment for new projects that would unlock increased power supply. Owing to its financial performance in recent years, including the accumulation of arrears, ZESCO is not deemed a creditworthy counterpart and Government is not able provide sovereign guarantees in the near term due to a lack of fiscal space under the IMF program.
10. **Government needs considerable technical and financial support that is long-term, predictable, and systematic to achieve its objectives of sector turnaround and universal access.** Whilst the Government has made substantial progress to date, several daunting challenges remain. As it concerns sector turnaround and least-cost expansion, consistent technical assistance and financing is needed to ensure the successful implementation of the multi-year tariff framework and ZESCO 10-year Strategic Plan. As it concerns access, financing remains a critical challenge given its social welfare nature, the Government’s very limited fiscal space in the medium term, and the overwhelming demands on the national budget from other social services such as health and education.
11. **Long-term systematic support provides critical signaling to other public and private sector investors; conversely, its absence risks undermining reform as Government understandably pursues sub-optimal alternatives to shore up the energy supply and political support.** Given the coupling of rapidly growing demand and vast energy resources (hydropower, solar, wind) there is persistent and widespread private sector interest in Zambia’s energy sector. Nevertheless, most if not all are hamstrung by ZESCO’s current financial position and the inability of Government to



issue sovereign guarantees has led most projects to stall, unable to secure lender approvals. The signaling effect of long-term, systematic support to return the utility to bankability is susceptible of catalyzing a positive feedback loop by unlocking the first investments with each of them strengthening the utility's position and unlocking further investment in turn.

12. **The WBG is the largest development partner in Zambia and is likely the only development partner currently able to play such a first-mover role.** The proposed Program will allow the Bank to continue supporting critical investments in the country while providing the Bank with the opportunity to share knowledge on core development issues and impact governance and management of Zambia's energy sector throughout several phases of support.
13. **Achieving the Government's vision for sector turnaround requires a combination of instruments and support that the Bank is uniquely positioned to provide through complementary MPAs.** The proposed program will complement Regional Energy Transmission, Trade and Decarbonization (RETRADE) Project, a regional MPA with the objective of scaling up the development of regional transmission and power trading capacity and the Accelerating Sustainable & Clean Energy Access Transformation (ASCENT) Project, a regional MPA with the objective of accelerating access to electricity across East and Southern Africa.
14. **The proposed National Energy Access and Transformation (NEAT) MPA is a Zambia-specific program that will return the sector to structural integrity so that it is able to engage in, support, and reap the benefits of other investment.** While the RETRADE and ASCENT programs focus on increasing supply through cross-border trade, and accelerating access to energy, they are unable to achieve turnaround of the power sector in isolation. With a focus on achieving financial sustainability and mainstreaming sustainable electricity access expansion mechanisms, the NEAT MPA aims to systematically tackle the underlying impediments to sector viability, change the paradigm for sector investment, and provide the framing around which other investments can be anchored. In doing so, the proposed program combines a signaling effect of long-term support to Government and sector stakeholders, an incentive and accountability mechanism for Government adherence to its own strategy for reform, and the flexibility of tailoring each phase to the context at the time of preparation to achieve the desired outcomes.
15. **For the first phase of the MPA, the PforR is the most suitable choice because it links disbursements to the achievements of electricity access results but also provides incentives for the implementation of the necessary policy and institutional reforms.** In so doing, the PforR will help to improve accountability and transparency in the use of public resources, particularly within ZESCO which has historically been seen as inefficient. By supporting the implementation of the ZESCO Strategic Plan, the PforR will also encourage ZESCO and Government to improve viability of the sector over the long-term rather than simply delivering one-time infrastructure investment.

C. Program Development Objective(s) (PDO) and PDO Level Results Indicators

Program Development Objective(s)

16. The Phase 1 Program Development Objective is to expand access to electricity in target areas and improve financial sustainability of the sector. This is a subset of the PrDO of the MPA.

PDO Level Results Indicators

17. The Phase 1 Program Results indicators (PDO indicators) include,
 - People provided with new or improved electricity services (number);
 - ZESCO cost recovery (percentage);
 - Reliability of electricity supply (CAIDI).



D. Program Description

18. The Government program encompasses three intertwined plans covering the electricity sector value chain namely, the Integrated Resource Plan 2050 ('IRP'), ZESCO Turnaround Strategy 2031 ('ZESCO plan') and Universal Energy Access strategy ('REA plan'). These also form the basis of the overall MPA framework. The PforR (Phase 1) focuses on the 2023-26 time-slice of the government program, with disbursement linked indicators associated with the short-term foundational priorities for sector transformation. Figure 1 presents the program boundary for Phase 1 of the PforR within the MPA framework and the government program.

Figure 1. Boundary of Government Program ('p') for Energy Sector Transformation and Phase 1 PforR ('P')

MPA Pillars	I. Optimized System Planning and Expansion	II. Financial and Operational performance	III. Access to Energy Services	IV. Enabling Private sector Participation
	<i>New:</i> RETRADE MPA ZA-TZ Interconnection	<i>Ongoing:</i> Donor budget support, IMF program	<i>New:</i> ASCENT MPA Energy Access Scale-up	<i>Ongoing:</i> Tariff reforms <i>Future:</i> Generation PPPs
	MV/LV Network strengthening	Debt Management, Loss reduction	Grid expansion and enhancement	IPP/PPP support, demand response
	Phase 1 PforR Hydro management, Control systems	Revenue Protection, Customer Service	Energy Access Fund, Off-grid solutions	Competitive Procurement
<i>US\$6.2 Billion estimated cost ZESCO Turnaround Strategy 2031</i>		<i>US\$2.9 Billion Access Strategy 2031</i>		
<i>US\$10.2 Billion estimated cost for 2050 Electricity Sector Integrated Resource Plan (IRP) based on 2030 projections of the updated Least Cost Geospatial Electrification Plan and Strategy</i>				

PforR Program Boundary

19. The Phase 1 PforR program will focus on a time-slice of the government program. The program support 2023-26 priority actions identified in the government program, aligned with the MPA pillars namely, optimized system planning and expansion; (ii) Improved operation and financial performance of ZESCO; (iii) Increased access to electricity, and (iv) Strengthened governance for private sector participation

20. The proposed disbursement linked indicators and results are (i) Improved sector planning and optimized system Management; (ii) Improved operational and financial performance of ZESCO; (ii) Increased Access to Electricity; and (iv) Strengthened governance for private sector participation.

E. Initial Environmental and Social Screening

21. An Environmental and Social Management Systems Assessment (ESSA) will be carried out for the proposed PforR operation prior to appraisal. The ESSA will assess the implementation and effectiveness of existing systems to ensure consistency with the six core principles outlined in the World Bank's Operational Policy on the PforR Financing. The assessment will focus on the review of national legislation and associated guiding instruments that support the environmental and social impact assessment processes in the REA and ZESCO.



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