

"Building a green future via Service, Innovation & Transformation!"

Technical Report 2023/24

Presented by

MINISTRY OF PUBLIC UTILITIES, ENERGY, LOGISTICS & E-GOVERNANCE

Contents

Message from the Minister	3
Ministry Leadership	4
Executive Summary	5
Introduction	6
Belize Postal Service	10
Energy Unit	16
E-Governance & Digitalization Dept	32
Lesson Learnt	48



Message from the Minister

Greetings,

This technical report provides a brief overview of our Ministry's accomplishments and articulates our vision for the next fiscal year. As the Minister of Public Utilities, Energy, Logistics, and E-Governance, I have enjoyed working with a dedicated team of professionals who have navigated challenges and shared their ideas for growth and improvement, propelling our Ministry towards a brighter future.

Major Strides Over the Past Year:

- · Utility Collaborations: The Ministry has continued to collaborate with
- utility companies and regulators to ensure cost-effective investments, optimize efficiency and processes, and enhance corporate values.
- Energy Projects: The Energy Unit, in partnership with various stakeholders, has launched numerous projects aimed at transforming existing systems into quality, affordable, and sustainable energy solutions.
- Postal Service Transformation: The Belize Postal Service has embarked on a journey to modernize and elevate its operations, aligning with international standards and benefiting local transactions.
- E-Governance Innovations: The E-Governance and Digitalization Department tirelessly drives innovation to transform Belize's future, making government services more accessible to its people and eliminating unnecessary processes.

The future is bright, green, and affordable. Most importantly, the future is sustainable.

HON. MICHEL CHEBAT, SC.

Michel

Minister, Ministry of Public Utilities, Energy, Logistics & E-Governance

Ministry Leadership



Hon. Michel Chebat, SC.

Minister of Public Utilities, Energy, Logistics & E-Governance



Jose Urbina, Eng. MBACEO in the Ministry of Public Utilities, Energy, Logistics & E-Governance

Executive Summary

The Annual Technical Report offers a comprehensive overview of the Ministry of Public Utilities, Energy, Logistics & E-Governance (**MPUELE**) and its activities for the fiscal period 2023/24. This report highlights the ministry's significant accomplishments and progress made during this period, aligning with the overarching goals of Plan Belize and Belize's medium-term development goals.

In alignment with **#PlanBelize**, the government has reaffirmed its commitment to transparency, accountability, and efficient management of the country's affairs. This commitment is reflected in the various initiatives and projects undertaken by MPUELE, which aim to enhance public utilities, energy infrastructure, logistics, and e-governance.

The Ministry of Public Utilities, Energy, Logistics & E-Governance (**MPUELE**) has unified various departments to create a cohesive strategy for improving national infrastructure and services. The report outlines the ministry's mission and highlights critical achievements, showcasing both large-scale and smaller projects. These accomplishments include the successful rebranding of postal services, the launch of new digital platforms, and advancements in renewable energy projects, among others.

Additionally, the report reflects on the lessons learned throughout the process, providing insights into areas of improvement and future opportunities. By addressing the goals, vision, staffing, and financial considerations, the action plan ensures that **MPUELE** continues to progress in alignment with the national development agenda.

Overall, this Annual Technical Report serves as a testament to the ministry's dedication to advancing Belize's infrastructure and public services, supporting the broader objectives of sustainable development and economic growth.

Introduction

The Annual Technical Report provides a detailed overview of the Ministry of Public Utilities, Energy, Logistics & E-Governance (MPUELE) and its activities for the fiscal period 2023/24. This report highlights the ministry's significant accomplishments and progress made during this period, aligning with the overarching goals of Plan Belize and Belize's medium-term development goals. In alignment with #PlanBelize, the government has reaffirmed its commitment to transparency, accountability, and efficient management of the country's affairs. This commitment is reflected in the various initiatives and projects undertaken by MPUELE, which aim to enhance public utilities, energy infrastructure, logistics, and e-governance.

Mission Statement

Belize's leading Ministry contributing to the improvement of the quality of lives by providing the legislative, regulatory, and policy framework that will ensure energy and public utility access, security, reliability, and affordability while promoting innovation, investments, development via the effective use of technology in areas of logistics, governance, and digitalization with premier service delivery provided by our well-trained, effective and properly staffed units focused on high-quality, on-time delivery and service excellence.

Our Vision

To foster and promote energy sector development, good governance practices, and accessible public utility services through innovation and workable partnerships.



Main Achievements

Main achievements of the Ministry by Department or Unit





Belize Postal Service

The fiscal year 2023-2024 marked a period of significant transformation and resilience for the Belize Postal Service. The Belize Postal Service continues to serve the Belizean populace effectively, making strides toward modernization and sustainability. This report outlines the key accomplishments, projects completed, projects in the pipeline, and lessons learned during this period.

Projects Completed in Fiscal Year 2023-2024

The Belize Postal Service has made significant strides in enhancing its operations and service delivery during the fiscal year 2023-2024. Among the notable achievements are extensive rebranding initiatives, the launch of a new website, the introduction of a track and trace application, the implementation of Al customer support, and comprehensive technical training for employees.

The rebranding initiative was a major milestone, with 90% of post offices across the country undergoing a transformation. This rebranding included updating the visual identity, enhancing the customer service experience, and improving the overall appearance and functionality of the post offices. By refreshing its image, the Belize Postal Service has made itself more appealing and recognizable to customers. This effort signals a strong commitment to modernization and improved services, which can significantly increase customer trust and engagement. A refreshed and consistent visual identity across all post offices helps in creating a unified brand image, fostering a sense of reliability and professionalism.

In addition to the rebranding, a new, user-friendly website was launched. This website provides comprehensive information about all postal services, including the stamp collection. Serving as a critical digital interface, the new website enables customers to easily access information and services.

It supports the digital transformation of the Belize Postal Service, making it more accessible and responsive to customer needs. The website's intuitive design and comprehensive content ensure that users can find what they need quickly and efficiently, thereby enhancing their overall experience.

The introduction of a track and trace application has been another significant advancement. This application allows customers to monitor their domestic speed mail in real-time, enhancing transparency and reliability. By providing real-time updates on parcel progress, the application gives customers peace of mind and reduces the number of customer service inquiries. This not only improves the customer experience but also frees up resources that can be redirected towards other critical tasks, thereby increasing operational efficiency.

To further improve customer service, the Belize Postal Service implemented "Edith," an AI-based customer support system. Edith provides 24/7 assistance on the website and social media platforms, ensuring that customers receive timely and consistent help. This AI system efficiently handles common queries, improving overall customer satisfaction and operational efficiency. By automating routine inquiries, Edith allows human customer service representatives to focus on more complex issues, enhancing the quality of service provided.

Technical training was conducted across all post offices to improve internal processes and enhance employee skills. Investing in employee training is crucial for ensuring that staff are equipped with the latest skills and knowledge to perform their duties effectively. The training programs covered various aspects, including the use of new technologies and processes, which are essential for improving service delivery. By enhancing the skills of its workforce, the Belize Postal Service ensures that it can keep pace with technological advancements and continue to provide high-quality services to its customers.



These initiatives demonstrate the Belize Postal Service's commitment to continuous improvement and customer satisfaction. By focusing on modernization, digital transformation, and employee development, the organization has made significant progress in enhancing its operations and service delivery. These efforts not only improve the customer experience but also position the Belize Postal Service for long-term success and sustainability in an increasingly digital and competitive environment.

Detailed Expansion on Key Initiatives for Belize Postal Service

System improvements are essential for increasing operational efficiency and accuracy. Revising and upgrading processes from manual to automated systems will minimize human errors, speed up processing times, and allow for better resource management. Transitioning to automated systems will enhance the overall efficiency of the postal service, ensuring quicker and more accurate handling of mail and packages. Another critical improvement is the implementation of a comprehensive delivery application with tracking capabilities. This application will enable customers to track their parcels in real-time, enhancing transparency and customer satisfaction by providing up-to-date information on the status of their deliveries. Additionally, installing X-ray scanning machines and surveillance cameras will significantly improve security measures, ensuring the safety and integrity of mail and packages. These systems will help detect and prevent the entry of prohibited items, thus maintaining the postal service's reliability and trustworthiness.

Ongoing training in customer service, leadership, emotional intelligence, postal security, and other key areas is crucial for maintaining high service standards and fostering a competent workforce. Customer service training will equip employees with the skills needed to handle inquiries and resolve issues effectively, leading to better customer experiences. Leadership training will prepare managers to lead teams efficiently, fostering a positive and productive work environment. Emotional intelligence training will help staff manage stress and interact empathetically with customers and colleagues. Additionally, specialized training in postal security will ensure that employees are well-versed in the latest security protocols and technologies, further safeguarding the postal system.

The purchase and consolidation of a new building to centralize operations will streamline workflows and improve communication among departments. A centralized location will also facilitate better coordination and more efficient use of resources. This consolidation will contribute to a more organized and effective postal service. Furthermore, the acquisition of additional vans and golf carts is vital for enhancing delivery services. These vehicles will expand the delivery network, allowing for faster and more reliable service, particularly in remote and underserved areas. Enhanced delivery services will improve customer satisfaction and contribute to the overall efficiency of the postal service.

The introduction of new flat-rate box options will provide customers with more affordable and predictable shipping solutions. Flat-rate boxes simplify pricing structures, making it easier for customers to understand and choose the best options for their needs. This initiative will make the postal service more user-friendly and competitive. Collaborating with supermarkets for pick-up and delivery services is another innovative approach to expanding services. This collaboration will create convenient drop-off and pick-up points for customers, increasing accessibility and reducing delivery times. Such partnerships will also generate additional revenue streams and enhance the postal service's presence in the community.

To ensure financial sustainability, it is necessary to increment service costs. While this may initially seem counterproductive, modest increases in service fees can significantly enhance revenue without deterring customers. Clear communication about the reasons for the price hikes, such as improved services and infrastructure, will help maintain customer trust and support. Additionally, collaborating with government and business entities for stamp collection initiatives can lower procurement costs and generate additional revenue. These collaborations can involve creating special edition stamps that reflect the interests and contributions of the partnering organizations, making them attractive to collectors and the general public.

Implementing these initiatives will position the Belize Postal Service for long-term success and sustainability. By focusing on system improvements, training and development, infrastructure enhancements, service expansion, and financial viability, the postal service can enhance its operational efficiency, customer satisfaction, and financial health. These steps will ensure that the Belize Postal Service continues to meet the evolving needs of its customers and maintains its vital role in the country's communication and logistics network.

The Belize Postal Service has demonstrated considerable progress in its efforts to modernize and improve service delivery. The initiatives undertaken during the fiscal year 2023-2024 have laid a strong foundation for future growth and sustainability. By addressing current challenges and leveraging opportunities for technological advancement and service diversification, the Belize Postal Service is well-positioned to achieve its long-term strategic goals and continue serving the Belizean populace with excellence.





Providing responsible, professional mail service to the people of Belize!

Energy Unit

European Development Fund (EDF-11) Energy Programme

Component 1: Energy Access

The Government of Belize, through the Ministry of Public Utilities, Energy, Logistics, and E-Governance, is engaged with the European Union under the 11th European Development Fund (EDF-11) project since 2019, following the signing of the financing agreement for a total of €13.5M. The EDF-11 project focused on increasing energy access across the country.

The primary objective of the EDF-11 Energy Access project is to create a National Rural Electrification Plan by identifying communities that are not connected to the national grid due to geographic and economic constraints. To date, twenty-three communities that remain pending.

Despite the challenges faced, MPUELE and stakeholders managed to gain positive traction towards the advancement of the EDF-11 project. Below the Energy Unit details progress:

- MOU Signed: Memoranda of Understanding (MOUs) have been signed with all beneficiaries under the EU Grant funding. This includes five villages (name the villages)
- Land Identification: Beneficiaries have completed the identification of land, with agreed-upon surveys conducted by Belize Electricity Limited (BEL) and the Ministry of Public Utilities, Energy, Logistics, and E-Governance (MPUELE).
- Design Packages: Design packages for microgrids are underway, triggering the Request for Proposal (RFP) for procurement under the EU procurement guidelines.
- Project Extension: A project extension and budget reallocation for the transmission line extension for San Carlos and Indian Church have been submitted to the EU.

Funding and Implementation:

Funds have been allocated to electrify five communities with the use of microgrids; however, due to financial constraints and load requirements of rural communities, because of the agro-productive sector, the recommendation to reallocate funds for the expansion of BEL transmission lines has been submitted to the EU. The expansion of the transmission line will ensure resiliency and load demands are met, strengthening the agricultural sector in the Northern region of Belize. The EDF-11 Component 1, Energy Access program, is set to be completed in 2024; however, a request to extend the project has been submitted to the EU. These projects are designed to be energy-sustainable, as BEL will operate and manage them. This aligns with Plan Belize's goal to improve the quality of life for the low-income rural population.



Component 2: EDF-11 Energy Efficiency in Government Buildings

Update on Belize's EDF-11 Energy Efficiency in Government Buildings

Under the **EDF-11 Energy Efficiency initiative**, significant progress has been made in enhancing energy efficiency within government buildings. The successful installation of efficient air conditioning (AC) units has been completed, significantly improving energy usage and reducing operational costs. Additionally, indoor lights have been replaced with energy-efficient LEDs, contributing to electricity savings. The initiative also continues to roll out standards and labels in collaboration with public and private sector partners, aiming to enforce the importation of energy-efficient residential appliances. This effort underscores the government's commitment to align with the **National Energy Policy 2023-2040** and promote sustainability and energy conservation, aligning with national goals to reduce carbon footprints and promote environmental stewardship. These measures collectively demonstrate Belize's proactive approach to achieving energy efficiency and sustainability across its infrastructure.







Update on Belize's Electric Mobility EU-Funded Project

Belize's Electric Mobility project, funded by the EU, has made significant strides in its mission to modernize and electrify transportation across the country. Key advancements include the successful capture of comprehensive road traffic data, which has been instrumental in drafting a business proposal aimed at promoting electric transportation within cities (intracity) and between major cities (intercity). This proposal provides bus owners with detailed insights into the cost savings associated with electric transportation, encouraging a shift towards more sustainable practices.



In collaboration with the UNDP, the procurement process for intracity electric buses has been concluded, facilitating the importation of three BYD e-buses. Stakeholders have undergone extensive training on the functionality and safety of these buses, ensuring a smooth transition to electric mobility.

The Belize City Council, one of the project's primary beneficiaries (intracity component), has commenced the construction of a charging hub to support these new electric buses. Additionally, Belize Electricity Limited (BEL) has deployed six chargers, and the Ministry of Public Utilities, Energy, Logistics, and E-Governance (MPUELE) plans to expand the charging infrastructure to Southern Belize, aiming for 100% coverage nationwide.

Component 3: Lait-up Belize Project - Enhancing Energy Security



The Lait-up Belize Project is a cornerstone initiative aimed at bolstering Belize's energy infrastructure and policy landscape. Its multifaceted approach includes providing technical guidance and support for the implementation of the EDF-11 microgrid project, drafting the National Energy Policy 2023-2040, developing energy efficiency strategies, and enhancing project visibility through strategic communication and policy objectives. This comprehensive initiative underscores Belize's commitment to sustainable energy and economic development.

Technical Guidance and EDF-11 Microgrid Project

Lait-up Belize has played a pivotal role in the EDF-11 microgrid project, which seeks to enhance energy access in rural and underserved areas of Belize. By providing technical guidance and support, Lait-up Belize has ensured the smooth implementation of microgrids, which are crucial for decentralized energy generation. These microgrids are designed to operate autonomously, providing reliable and sustainable electricity to communities that are not connected to the national grid. The project's technical team has worked closely with stakeholders to address challenges related to grid integration, system design, and operational efficiency.

National Energy Policy 2023-2040

One of the significant achievements of the Lait-up Belize Project is the drafting and successful launch of the National Energy Policy 2023-2040. This policy, unveiled during Energy Month in November 2023, sets the strategic direction for Belize's energy sector over the next two decades. It outlines goals for renewable energy adoption, energy security, and environmental sustainability. The policy emphasizes the importance of transitioning to clean energy sources, enhancing energy efficiency, and fostering innovation in the energy sector. Lait-up Belize's role in drafting this policy involved extensive research, stakeholder consultations, and alignment with international best practices.

Energy Efficiency Strategies and Training

Energy efficiency (EE) is a critical component of Belize's sustainable energy strategy. Lait-up Belize, in collaboration with the Ministry of Public Utilities, Energy, Logistics, and E-Governance (MPUELE), has launched a comprehensive "Train the Trainers" program focused on energy efficiency. This initiative aims to educate and empower stakeholders across various sectors about the benefits and practices of energy efficiency. By training key personnel who can then disseminate this knowledge, the program ensures a broad reach and lasting impact. The training covers areas such as energy audits, efficient lighting, HVAC systems, and behavioral changes that can lead to significant energy savings.

Policy and Communication Objectives

To enhance the visibility and impact of the EDF-11 project, Lait-up Belize has developed targeted policy and communication strategies. These strategies are designed to inform and engage the public, stakeholders, and policymakers about the project's goals, progress, and benefits. Effective communication is vital for building support and ensuring the successful implementation of energy initiatives. Lait-up Belize's communication efforts include public awareness campaigns, stakeholder meetings, and the use of various media platforms to disseminate information.

Microgrid Rollout and Policy Development

The rollout of microgrids under the EDF-11 project requires careful planning and coordination. Lait-up Belize has provided essential technical resources and guidance for this rollout, ensuring that the microgrids are implemented effectively and efficiently. This includes developing a microgrid policy that facilitates stakeholder engagement and the smooth handover of operations to Belize Electricity Limited (BEL), the national utility company. The policy outlines the roles and responsibilities of different stakeholders, operational protocols, and maintenance procedures to ensure the long-term sustainability of the microgrids.





Belize Energy Statistics Initiative

The Belize Energy Statistics Initiative, spearheaded by the Energy Unit through the Ministry of Public Utilities, Energy, Logistics, and E-Governance (MPUELE), marks a significant advancement in the country's energy management and policy formulation. The initiative's cornerstone achievement is the successful publication of the Annual Energy Report 2023/24, which provides a comprehensive overview of Belize's energy landscape.

The Annual Energy Report 2023/24 offers detailed insights into the country's energy mix, energy consumption per sector, and the major emitters of carbon dioxide (CO2) and greenhouse gases (GHG). This report is invaluable for policymakers, industry stakeholders, and the public, fostering transparency and informed decision-making.

The report highlights the diversity of Belize's energy mix, detailing the contributions of various energy sources such as hydro, biomass, solar, and fossil fuels. This analysis is crucial for understanding the balance between renewable and non-renewable energy sources and planning future energy investments to achieve 75% renewables by 2030. The data indicates a positive trend towards renewable energy adoption, reflecting the country's commitment to sustainability and reducing reliance on fossil fuels.

Another key feature of the report is the breakdown of energy consumption across different sectors, including residential, commercial, industrial, and transportation. This sectoral analysis helps identify patterns of energy use and areas where efficiency improvements can be targeted. For instance, the report shows that the transportation sector remains a significant energy consumer, underscoring the urgent need for initiatives such as electric mobility projects to mitigate fuel consumption and emissions.

The Belize Energy Statistics Initiative and the Annual Energy Report 2023/24 publication represent significant steps forward in the country's energy management strategy. By providing detailed, sector-specific data on energy consumption and emissions, the report empowers stakeholders to make informed decisions to enhance energy efficiency, promote renewable energy, and reduce environmental impact. This initiative supports national energy policy 2023-2040 and aligns with Belize's broader sustainability and climate resilience goals under SDGs and NDCs. Through continued efforts in data collection and analysis, Belize is well-positioned to advance its energy sector towards a more sustainable and efficient future.

Energy Access – emPOWER Rurual Electrification Project (UAE)

Energy Access emPOWER Rural Electrification Project Funded by the UAE

The Energy Access emPOWER Rural Electrification Project, funded by the United Arab Emirates (UAE), marks a transformative chapter in Belize's journey towards sustainable development and energy equity. This project's primary objective is to provide standalone renewable electricity generation to three rural communities: Indian Creek, Golden Stream, and Medina Bank. With a total generation capacity of 403 kW, supported by battery storage and resilient diesel generators as a backup, the initiative is a testament to innovative solutions addressing energy poverty in remote areas.

Inaugurated in October 2022, the solar generation facility represents a significant milestone in Belize's rural electrification efforts. This facility is not just a beacon of renewable energy but also a symbol of international cooperation and commitment to sustainable development. The facility includes advanced solar panels capable of generating 403 kW, which are complemented by battery storage systems to ensure a steady supply of electricity. Additionally, diesel generators provide backup to maintain reliability during periods of low sunlight or high demand.

Belize Electricity Limited (BEL) played a crucial role in the project by funding the transmission and distribution infrastructure necessary to connect these rural communities to the new solar facility. This collaboration ensured that the generated power could be efficiently and reliably delivered to households, schools, and local businesses, significantly improving the quality of life and economic opportunities in Indian Creek, Golden Stream, and Medina Bank.

The emPOWER project's impact on these communities is profound. By providing reliable and sustainable electricity, it has enabled residents to transition from reliance on kerosene lamps and diesel generators to clean, renewable energy. This shift not only reduces greenhouse gas emissions but also lowers household energy costs and improves indoor air quality, contributing to better health outcomes.

Access to electricity has facilitated educational improvements, with schools now able to utilize electronic devices and lighting, thereby extending study hours and enhancing the learning environment. Healthcare services have also seen enhancements, as clinics can now operate more effectively with reliable power for medical equipment and refrigeration for vaccines.



Alignment with Sustainable Development Goals and National Commitments

The emPOWER project aligns closely with several United Nations Sustainable Development Goals (SDGs), particularly SDG 7 (Affordable and Clean Energy), SDG 13 (Climate Action), and SDG 3 (Good Health and Well-being). By extending electricity access to previously unelectrified communities, the project supports Belize's commitment to leaving no one behind, a core principle of the SDGs.

Additionally, the project contributes to Belize's Nationally Determined Contributions (NDCs) under the Paris Agreement, which include targets for increasing renewable energy adoption and reducing carbon emissions. By integrating renewable energy solutions into rural electrification efforts, Belize is also aligning with its midterm development strategies aimed at sustainable economic growth and environmental stewardship.

With the successful implementation of the emPOWER project, Belize has reduced the number of unelectrified rural communities from 23 to 20. This progress underscores the feasibility and benefits of renewable energy projects in remote areas and sets a precedent for future initiatives. The government, in collaboration with international partners, plans to continue expanding access to electricity, with the ultimate goal of achieving 100% electrification.

The Energy Access emPOWER Rural Electrification Project funded by the UAE is a landmark initiative that has brought transformative change to three rural communities in Belize. By providing reliable, clean electricity, the project enhances quality of life, supports economic development, and strengthens Belize's commitment to sustainable and inclusive growth. As Belize continues to work towards full electrification, the emPOWER project stands as a beacon of what can be achieved through international cooperation and innovative energy solutions.





Ongoing Projects:

Energy Access Master Plan

The primary objective of this project is to assist the Government of Belize (GOB) in developing a comprehensive National Rural Electrification Plan aimed at achieving universal access to energy by 2030.

The project involves formulating a georeferenced rural electrification plan using Geographic Information System (GIS) technology to identify cost-effective energy solutions and necessary investments. The plan will optimize the total cost while ensuring universal energy access by 2030. It includes estimating the energy consumption for each community and projecting the costs for various energy solutions. Additionally, the plan will calculate the investment needs, encompassing capital costs (CAPEX), operational expenses (OPEX), and administrative costs. By optimizing global costs, a comprehensive execution and investment plan will be developed. Scenarios and sensitivities will be created to anticipate different outcomes, and emissions reductions from renewable technologies will be estimated. technologies.

The project involves developing a comprehensive georeferenced database using Geographic Information System (GIS) technology, which will contain critical information for planning and monitoring the rural electrification efforts. This database will include data on community locations, building energy consumption, existing power lines, access roads, protected areas, distribution company concession areas, and the socioeconomic status of the communities. The database will be compiled using both available information and remote data collection methods, such as satellite imagery, to ensure accuracy and completeness.

In addition to database development, the project entails projecting the demand for rural electrification up to 2030 or another specified horizon. These projections will be crucial for informing the development of the electrification plan, ensuring that the plan is grounded in realistic and comprehensive data. By understanding future demand, the project can better tailor its strategies and investments to meet the anticipated needs of rural communities.

A detailed investment plan will also be developed to achieve the goal of universal energy access by 2030. This plan will be based on a sustainable financial framework that supports long-term implementation, ensuring that the electrification efforts are financially viable and can be maintained over time. The investment plan will detail the necessary funding and resources, including capital costs, operational expenses, and administrative costs, providing a clear roadmap for achieving universal energy access.

To ensure consistency and quality across the projects resulting from the national electrification plan, minimum technical specifications will be proposed. These specifications will set the standards for equipment, installation, and operational procedures, ensuring that all projects adhere to high-quality benchmarks and can deliver reliable and efficient energy services to rural communities.

Moreover, the project will identify short-term operational and technical capacity-building initiatives for key sector institutions and stakeholders involved in the plan's implementation. These initiatives will focus on enhancing the skills and knowledge of personnel involved in the electrification efforts, ensuring they are well-equipped to manage and sustain the projects. Training programs, workshops, and other capacity-building activities will be organized to address specific needs and gaps, fostering a competent workforce capable of driving the rural electrification agenda forward.

Overall, this comprehensive approach, from database development and demand projection to investment planning, technical specifications, and capacity building, aims to create a robust framework for achieving universal energy access in Belize by 2030. Through these coordinated efforts, the project will significantly contribute to the sustainable development and energy security of rural communities in Belize.

This comprehensive approach aims to provide the GOB with a robust framework to achieve universal energy access, ensuring sustainable and optimized solutions are in place to meet the energy needs of rural communities by 2030.

E-Governance & Digitalization Department

As guided by the **National Digital Agenda**, the Department continued to focus its annual work plan in four key areas: (I) Enabling E-Governance, (II) Institutional Strengthening, (III) Developing shared services and infrastructure, and (IV) Cross-sectoral Support. These critical activities are designed to achieve the various program objectives from the National Digital Agenda under the three strategic themes.

Enabling E-Governance



The series involved the delivery of eight (8) informative webinars on the following key legislations:

- 1. Digital Government Act
- 2. Electronic Transactions Act
- 3. Public Sector Data Sharing Act
- 4. Data Protection Act
- 5. Electronic Transfer of Funds Crimes Act
- 6. Electronic Evidence Act

The department first introduced the groundbreaking E-Legislations in our Digital Spotlight Podcast; however, given their level of national importance, an 11-video miniseries was launched on the Department's social media pages. The series included promotional explanatory videos on the:

- · Data Protection Act
- · Electronic Transaction Act
- · Electronic Funds Transfer Crime Act
- Electronic Evidence Act
- Public Sector Data Sharing Act

Project #2 - National Data Strategy



With support from the Inter-American Development Bank and in collaboration with key government stakeholders, the EGDD led the drafting of Belize's first National Data Strategy. The Strategy presents a holistic approach to data that is expected to facilitate coordination and promote innovation while safeguarding the privacy and rights of individuals. A Data Strategy establishes standards, processes, and frameworks for managing and protecting data.

Institutional Strengthening

Project 3: Agile Training for Public Officers

The EGDD has adopted an Agile Culture into its processes and projects. The Agile framework creates opportunities for stimulating meaningful change, enables innovation, facilitates quick responses to changes in demand and most importantly, encourages citizen-centered actions. Given the positive results that have been achieved by adopting the agile culture, the EGDD aimed to create awareness and understanding of the underlying frameworks to extend the benefits among the public sector.

The course introduced agile concepts, techniques and tools to allow Public Officers to succeed in uncertain environments by fostering the ability to create and respond to change. The course saw participation from 90% of government ministries.





Project 4: Data 101: From Data to Decisions



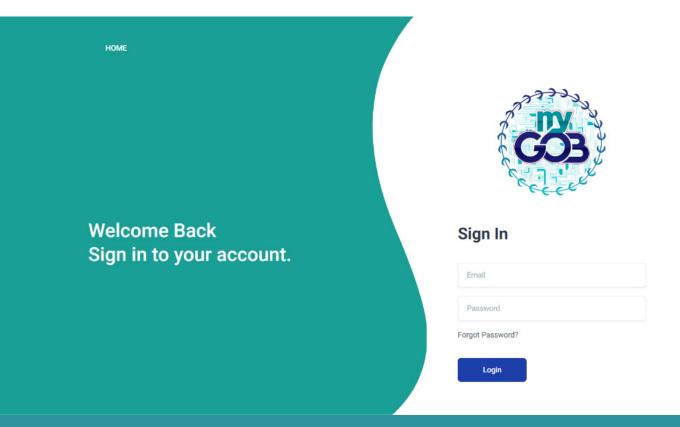


As part of leading digital transformation efforts across the government, the EGDD also aims to build capacity among the public sector to adopt and embrace the culture and processes being introduced. Data plays a key role in digitalization efforts, given that the data generated by the government is a critical asset for improving services and making data-driven decisions.

The Data 101 Course fostered knowledge on the importance of data to improve service delivery, efficiency, and decision-making. It incorporated both theory and practical exercises which introduced concepts and methods for utilizing data in the workplace to solve problems and make decisions. The course covered key topics including data for decision-making, introduction to the data life cycle and data analysis exercises.

Developing Shared Services and Infrastructure

Building infrastructure and shared platforms to support the Digital Agenda programs in developing national digital solutions to create an efficient, citizen-oriented, and transparent government.



Project 5 - MyGOB Platform

To facilitate the adoption and utilization of Information and Communication Technology (ICT) in government, the Digital Agenda identified critical cross-functional platforms that could support the government's delivery of services. In particular, the Digital Agenda highlighted the need to support the government's human resource management and services to optimize the government's allocation of resources and drive internal digital transformation.

Through a consultative process with the HRMIS Unit and their internal administrative officers, the E-Governance and Digitalization Department under the Ministry of Public Utilities, Energy, Logistics and E-Governance (MPUELE) supported the design and development of the MyGOB platform. As part of the initial phase, MyGOB platform achieves the automation of sick and vacation leave applications, recommendations, approval, and cancellation for all public officers. The system automatically calculates the defined rules that are put in place to control vacation days and will send notifications via email to inform of mandatory and accumulated leave. Periodic and historical reports will be available for viewing, exporting, and printing. MyGOB platform is the centralized platform for government to employee services.

Project 6 - National Biometrics Strategy and Action

A National Identification System has been identified as fundamental to the government's commitment to transforming Belize into a digital nation, as highlighted in the National Digital Agenda. In early 2023, the Cabinet approved and endorsed the National Identification (ID) Strategy, which serves as a roadmap for the successful development of Belize's National ID System. An important component of building a secure, and robust National ID System is the use of biometrics for effective validation of identity.

Cross-sectoral Support

Project #7 - Creating Cyber Awareness for Children and Teens Program

As such, the EGDD led the development of the **National Biometrics Strategy** and Action Plan. This process involved conducting a gap analysis of the existing biometrics systems within Belize. Understanding the current biometrics ecosystem allowed for the development of a comprehensive plan which detailed key recommendations and actions for building and managing the National ID biometrics database and improving the collection of biometrics across government entities. The development of the plan was a collaborative process, involving the inclusion of various government agencies including the Social Security Board, Ministry of Foreign Affairs, Foreign Trade and Immigration, Belize Polic Department, Elections and Boundaries Department, Belize Tax Service and the Ministry of Health and Wellness.

Project 7-Strengthening Civil Registry Program



A well-functioning civil registry system is recognized as a growing priority worldwide in ensuring an individual's right to a legal identity. It provides a foundation for an identity management system that facilitates citizens' access to critical public services, including healthcare, education, and employment. In 2022, MPUELE and the Attorney General Ministry officially launched the "Strengthening Registry Program" with the core objective to modernize and improve service delivery at the Vital Statistics Unit (VSU). This transformation is a national priority as it is key to executing the vision of the National Digital Agenda: to build trust in government services by providing reliable, inclusive, safe, and efficient digital solutions for all.

This comprehensive digital transformation program aims to achieve the following objectives:

- 1. To strengthen the legal environment in Belize relating to vital events to align with best practices;
- 2. To strengthen the human resources and IT infrastructure to support a modern civil registry system;
- 3. To increase birth registry coverage and awareness of all services;
- 4. To simplify and re-engineer the business process of all services;
- 5. To support the transition to a full online application platform;
- 6. To improve the general public's perception of the Vital Statistics Unit; and
- 7. To promote collaboration and interoperability between public sector agencies.

In the last fiscal year, some key program milestones have been accomplished:

Launched the consultancy "Design, Develop and Implement a Civil Registry and Vital Statistics System", with the support of the Inter-American Development Bank. The aim of the CRVS will allow for the delivery of online services to citizens and will facilitate all business functions of the VSU. As such, it will ensure efficient, timely and accurate service delivery for citizens and other government institutions alike.

So far, the development of the CRVS has included:

- Reengineering service processes
- Standardizing data structure and collection.
- Collaborating with key life event informants such as the Ministry of Health and Wellness, Courts and Marriage Officers to ensure alignment in registration of the respective life events.
- Integration with key identity platforms for automated identification validation services. These include integration with the Passports System and the Social Security Board system.
- The development and testing of VSU services within the CRVS, including births, deaths, marriages, adoptions and deed polls.
- Launched the "Digitization of Historical Records" project. Digital records are a critical element of preserving and managing a country's civil registry. They are also a key input towards the delivery of timely and accurate services. As part of this project, a digitization center was set up and a team of Data Entry Clerks was hired to conduct the digitization of records. The process of digitization has been ongoing. Thus far the team has completed the digitization of all birth records for the Toledo district.
- Developed an Organizational Management Strategy for the VSU with the support of the United Nations Development Programme. The development of the strategy is a key component of the institutional strengthening project area. As part of the Strategy's development, an assessment of the current institutional culture, structure and processes was conducted. As such, with contributions from the VSU staff and key stakeholders, the Strategy presents recommendations to prepare VSU for the delivery of online services, improve the organizational structure to meet the service demands and expectations, improve organizational culture and enhance customer service and support.



Site Visit to the Digitization Center





Consultation Session with Marriage Officers as part of the development of the CRVS

Project 9: We are Girls in Tech Event 2023

In 2023, the EGDD held the first Annual We are Girls in Tech Event, which is celebrated on the internationally recognized Girl's in ICT Day. The yearly event aims to promote the participation of young girls and women in ICT-related fields and seeks to empower and elevate the voices of women in technology.

The event involved the hosting of a webinar which highlighted the achievements of girls in the ICT field in an attempt to encourage and inspire other girls across Belize to become more involved in the field. The panel of speakers featured a diverse group of high school girls who shared their personal experiences and insights on how to navigate the industry and overcome barriers faced by girls in ICT.

As part of the event, the Digital Skills for Life Video Competition was also hosted. The video competition allowed girls to highlight challenges they face in building digital skills and solutions to these challenges.



We are Girls in Tech Event participants



Winner of the Digital Skills for Life Video Competition



Speakers of the We are Girls in Tech Webinar

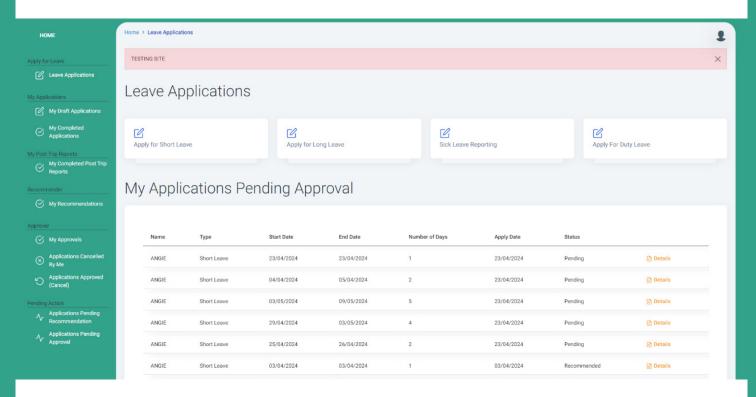
In Progress

Project 1 – MyGOB Expansion- Duty Leave Module

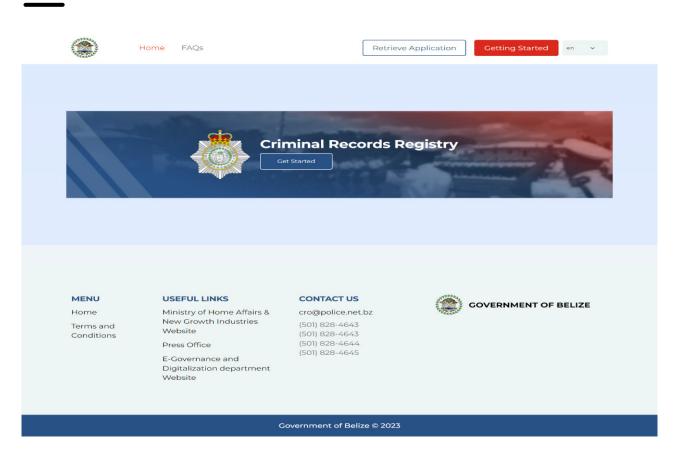
In keeping with the vision of MyGOB platform as a centralized platform for the delivery of government to employee services, the onboarding of Duty Leave Service is currently in the final stages of development.

This new leave service will facilitate online application, recommendations, approval and notifications of Duty Leave applications, allowing the respective users to make informed decisions as it relates to travel cost, overall travel length and applicant travel frequency. It will also support communication between the Office of the Prime Minister and the Finance Officers for payment processing. This new digitized service will provide increased accountability to both applicants and respective process users, allowing for easy data filtering and reporting.

This project is being done in collaboration with the Office of the Prime Minister.







The Application for a Record of Conduct, commonly known as a "Police Record," is one of the most frequently utilized government services. While applying for a job or other official documents, you must submit the Record of Conduct. The administrative process is currently concentrated at the Belmopan Police Station and is entirely manual for Record of Conduct applications.

To support improved service delivery to citizens, the EGDD is currently finalizing the development of an online application portal. The platform will facilitate the complete delivery of online services including the distribution of electronic certificates, notifications, and processing of applications. It will also improve the management and reporting of key performance indicators and revenue collection by the Belize Police Department. The platform will also include a customer service survey to capture useful information by users to continuously improve the user friendliness and efficiency of the platform.

Project 3: Civil Registry and Vital Statistics System Launch

As part of the larger Strengthening Civil Registry Program, the development of the Civil Registry and Vital Statistics System is being finalized and is expected to launch in the latter half of 2024. The CRVS will serve as an integrated platform for the management of Belizean's vital records. Through the CRVS, the Vital Statistics Unit will offer fully online services to citizens. Ensuring that the delivery of these critical services is timely, accurate and efficient.

The CRVS is being integrated with key government systems for secure data sharing and validation services, fostering the culture of a unified Government for the benefit of each citizen.

Project 4 - Digital Inclusion Program

The Digital Inclusion Program, which falls under the National Digital Agenda, seeks to facilitate access, adoption, and application of information and communication technologies to marginalized communities as a means for socio-economic prosperity. With that, a digital society depends on digital talent and skills, yet there is a widening digital gap due to new technology and consumer demands. As such, this project aims to support access to online government services while supporting country-wide capacity building in the IT field. The Digital Inclusion Program activities include (i) establishing digital connect centers across rural communities; and (ii) conducting digital skills and literacy training for youths, women, and the elderly. The initial phases of this initiative are being funded through Taiwan's International Cooperation and Development Fund (ICDF) and the United Nations Development Program (UNDP) in collaboration with the Government of Belize.

To date, 13 Digital Connect Centers have been launched, with access points in every district. Through these centers, upwards of 200 youth have enrolled in and completed Basic Digital Skills Sessions countrywide. The overall project, including all components, is expected to be completed in August 2024.















Project 5 - Cataloging of Government Services Project

To achieve the E-Services portal, a key component is the inventory of all government services. Therefore, understanding the complexity but also the national importance of cataloging, the Department, alongside the UNDP is conducting the Cataloging of Government Services Project. The project's scope includes creating, developing, and implementing a service catalog exercise to gather data on public services and guide the publication's design. Building the Unit's capacity to use the methodology, templates, and exercise is another aspect of this service.

This project will see the development of a tailored app which will provide a user-friendly approach for government partners to enter and map their services. The app will allow for the viewing of high impact service areas, service costs and gap areas.

Similarly, the project will see government stakeholder socialization and orientation sessions to equip our key partners with an understanding and the importance of the cataloging process. The sessions will include a project introduction and focus group discussions to allow service owners the opportunity to break down their service details while identifying services which no longer apply or services which are newly incorporated. The expected project end date and government services

Project 7 - Digital Skills Training for Girls

The EGDD, in partnership with the United Nations Development Programme (UNDP), actively strives to empower and inspire females to engage in the field of Information and Communication Technologies (ICT) with the aim of fostering gender inclusivity and bridging the digital gender gap. As such, it has led various initiatives that seek to engage girls and encourage them to pursue careers in ICT. Understanding the importance of leaving no one behind, the EGDD and its partners will deliver a comprehensive training program to 176 girls, ages 14-20 years, in graphic design and website development. The training will be executed in 13 Digital Connect Centers located across Belize; making the opportunity accessible to girls across the country. The timeframe of implementation for the project is April to December 2024.

Both entities recognize the pivotal role of digital skills in driving economic empowerment, particularly for marginalized groups like women. Therefore, this initiative will equip them with the tools necessary to thrive in the modern workforce.

Project 8 - Belize's National ID Pilot

As part of the National ID Project, the EGDD also launched a "National ID Pilot" with the aim to determine the most effective approach and the necessary enabling environment to scale up the project to a national level. The Ministry of Public Utilities, Energy, Logistics and E-Governance (MPUELE) signed a Memorandum of Understanding with the International Institute of Information Technology, Bangalore (IIIT-B) to adopt the Modular Open-Source Identity Platform (MOSIP) in a 5-month pilot. In the upcoming months, the Government of Belize representatives will participate in weekly training sessions to gain a full-functional understanding of MOSIP. Towards the end of the pilot period, the team will lead an enrolment exercise where 1000 individuals will be registered for a National ID using MOSIP.



Lessons Learnt

E-Governance and Digitization Department

The journey of E-governance and Digitization is multifaceted and requires careful consideration of numerous factors to ensure successful implementation and sustainable outcomes.

Here are the key lessons learnt from our experiences:

1. Early Stakeholder Engagement

One of the most critical lessons learnt is the importance of engaging stakeholders early in the digitization process. Early engagement helps to clarify expectations, gather valuable input, and address concerns that may arise. This proactive approach minimizes confusion and resistance, ensuring a smoother implementation. Engaging stakeholders from the onset promotes a sense of ownership and commitment to the project's success.

2. Change Management Initiatives

Implementing ICT solutions often brings about apprehensions regarding job security among employees. To mitigate these fears, it is essential to promote change management initiatives. These initiatives should focus on educating employees about the benefits of digitization, providing training to upskill the workforce, and ensuring that they understand that ICT solutions are designed to complement their roles, not replace them. Clear communication and support during the transition phase are vital to fostering a positive attitude towards change.

3. Promote Beneficiary Project Ownership

For any digitization project to be successful, the beneficiaries must feel a sense of ownership. This can be achieved by involving them in the planning and decision-making processes, addressing their specific needs, and incorporating their feedback. When beneficiaries feel that they have a stake in the project, they are more likely to support and actively participate in its implementation.

4. Establish a Clear Responsibility Matrix

A well-defined responsibility matrix is crucial for the smooth execution of digitization projects. This matrix should outline the roles and responsibilities of all stakeholders involved, ensuring that everyone understands their tasks and obligations. Clear delineation of responsibilities helps prevent overlaps andgaps in project execution, promoting accountability and efficiency.

5. Enhanced Agile Project Management Framework

Adopting an agile project management framework has proven to be beneficial in managing digitization projects. Agile methodologies allow for flexibility, continuous improvement, and iterative progress. This approach enables project teams to adapt to changes swiftly, address issues promptly, and deliver incremental value throughout the project lifecycle.

6. Early Determination of Software Requirements

It is imperative to determine the minimum requirements of any software development project at an early stage. This includes understanding the functional and technical specifications, user needs, and compliance requirements. Having a clear and agreed-upon sign-off sheet ensures that all stakeholders are aligned on the project's scope and objectives, reducing the risk of scope creep and miscommunication.

7. Clear Reengineering Business Process Strategy

Digitization often necessitates the reengineering of existing business processes. Establishing a clear strategy for business process reengineering ensures that workflows are optimized for efficiency and effectiveness. This strategy should include mapping current processes, identifying areas for improvement, and designing new processes that leverage digital capabilities.

9. Continuous Monitoring and Evaluation

Finally, continuous monitoring and evaluation are essential for ensuring that digitization projects achieve their intended outcomes. Regular assessments help identify areas for improvement, measure progress, and ensure that the project remains aligned with its goals.

areas for improvement, measure progress, and ensure that the project remains aligned with its goals. Feedback loops and performance metrics are vital for driving ongoing optimization and success.

The journey of E-governance and Digitization is complex, but by applying these lessons learnt, we can navigate the challenges more effectively and achieve sustainable digital transformation. Early stakeholder engagement, robust change management, clear responsibility matrices, agile methodologies, precise software requirements, strategic business process reengineering, and continuous evaluation are all critical components of successful digitization initiatives.

Lessons Learnt from EDF-11 Energy Unit Projects

The EDF-11 projects have provided significant insights into the complexities and challenges of rural electrification and renewable energy initiatives. Here are the key lessons learnt from these projects, which can guide future efforts to ensure more effective implementation and greater community impact.

1. Engage Maya Communities for Buy-In

One of the most critical lessons is the necessity of engaging Maya communities early in the project planning stages. Gaining their buy-in is essential for the success of rural electrification projects. By involving these communities from the onset, we can ensure that their needs and perspectives are adequately considered. This engagement not only fosters trust but also enhances the community's ownership of the projects.

2. Early Community Engagement

Earlyandcontinuous community engagement is vital to mitigate miscommunication and ensure the smooth progression of projects. Following the steps of the Free, Prior, and Informed Consent (FPIC) Protocol is imperative. This approach ensures that the communities are fully informed and voluntarily agree to the projects. It helps to build a foundation of transparency and respect, which is crucial for long-term sustainability.

3. Building Technical Capacity

Building technical capacity within the Energy Unit is essential for the proper and accurate evaluation of renewable energy projects.

There is a need to develop skills in using renewable energy generation tools and technologies to determine proper engineering designs. By enhancing technical expertise, we can ensure that the projects are designed and implemented effectively, meeting the specific needs and conditions of the communities.

4. Open Communication and Responsibility Sign-Off

Establishing open lines of communication with all stakeholders is crucial. This includes creating a sign-off sheet that clearly delineates responsibilities and includes target dates. Such a document helps to clarify expectations, prevent misunderstandings, and ensure accountability. Regular updates and meetings can

further enhance this communication, ensuring that all parties remain aligned throughout the project lifecycle.

5. Coordination Between Utility and Regulator

Better coordination between the utility companies and regulators is necessary to foster open channels of communication and avoid miscommunication. Promoting collaboration and understanding between these entities can streamline processes and address issues more efficiently. This coordination is essential for creating a supportive regulatory environment that facilitates project implementation and operation.

6. Need for an Energy Act and Action Plan

The absence of an Energy Act and a comprehensive Energy Action Plan has been a significant barrier to the uptake of renewable energy projects, including microgrids and e-mobility initiatives. Establishing a clear legislative framework and action plan is critical. These should outline the policies, incentives, and guidelines necessary to promote renewable energy adoption. Such frameworks provide clarity and stability, encouraging investment and participation from various stakeholders.

7. Promoting Renewable Energy Incentives

To increase the adoption of renewable energy technologies, developing and implementing effective incentives is essential. These could include tax breaks, subsidies, or grants that make renewable energy projects more financially viable. Incentives are a proven way to accelerate the deployment of renewable energy systems, making them more attractive to investors and end-users alike.

The lessons learnt from the EDF-11 projects highlight the importance of community engagement, technical capacity building, open communication, and regulatory support in successfully implementing rural electrification and renewable energy projects. By addressing these areas, future projects can be more effectively designed and managed, leading to greater community impact and sustainability. Establishing a robust legislative and policy framework and promoting renewable energy incentives will further support these efforts, driving the transition to a more sustainable and equitable energy future.

Investment Opportunities in Belize's E-Governance, Energy, and Postal Services

Belize presents numerous promising investment opportunities in e-governance, digitization, energy, and postal services. These sectors are pivotal for the country's socio-economic development and offer substantial potential for Public-Private Partnerships (PPP) and foreign investments. By leveraging these opportunities, Belize can enhance its energy security, reduce its carbon footprint, and drive digital transformation.

E-Governance and Digitization

- 1. Digital Infrastructure Development: Investment in robust digital infrastructure is crucial for the effective implementation of e-governance. Opportunities exist in building high-speed internet networks, data centers, and cloud services. These investments will ensure seamless connectivity and data management, which are essential for modern digital services.
- 2. Smart Cities Initiatives: Developing smart cities can significantly improve urban management and service delivery. Investments can focus on smart grid systems, intelligent transportation, automated waste management, and smart lighting solutions. These initiatives not only enhance living standards but also contribute to sustainability goals.
- **3. E-Services Platforms:** There is a growing need for comprehensive e-services platforms that offer government services online, such as e-health, e-education, e-taxation, and e-licensing. Investors can partner with the government to develop, implement, and manage these platforms, ensuring accessibility and efficiency.
- **4. Cybersecurity Solutions:** As digital transformation accelerates, cybersecurity becomes paramount. Investing in advanced cybersecurity solutions, including threat detection, risk management, and data protection services, can secure Belize's digital infrastructure and build trust among users.

Energy Sector

- 1. Renewable Energy Projects: Belize has significant potential for renewable energy, particularly in solar, wind, and hydroelectric power. Investments in these areas can help reduce the country's reliance on fossil fuels, enhance energy security, and contribute to carbon footprint reduction. PPPs can facilitate the development of large-scale renewable energy projects, including solar farms and wind turbines.
- 2. Energy Storage Systems: Investing in energy storage solutions such as batteries and pumped hydro storage is critical to ensure a reliable supply of renewable energy. These systems can store excess energy generated during peak production times and release it when demand is high, stabilizing the grid.
- 3. Microgrids and Distributed Generation: Developing microgrids and distributed generation systems in rural and off-grid areas can improve energy access and resilience. Investments can focus on creating community-based renewable energy systems that provide reliable and sustainable power to underserved regions.
- **4. Energy Efficiency Programs:** Investing in energy efficiency programs that reduce consumption and operational costs is a significant opportunity. This includes retrofitting buildings with energy-efficient technologies, promoting energy-saving appliances, and implementing smart grid technologies to optimize energy use.

Belize Postal Services

- 1. Digital Transformation of Postal Services: Investing in Belize Postal Services; digital transformation can modernize its operations and service delivery. This includes developing e-commerce platforms, digital mail services, and automated sorting and tracking systems. These enhancements will improve efficiency, customer satisfaction, and competitiveness.
- **2. Logistics and Delivery Infrastructure:** Enhancing logistics and delivery infrastructure is critical for the growth of postal services. Investments can focus on modernizing fleet management, establishing regional distribution centers, and integrating advanced tracking and routing technologies.
- **3. Financial Services Expansion:** The postal service can diversify its revenue streams by expanding into financial services such as mobile banking, money transfers, and insurance products. Investors can partner with the postal service to develop and offer these services, particularly in underserved areas.

4. Green Postal Initiatives: Implementing green initiatives within postal services can contribute to Belize's sustainability goals. Investments can target the adoption of electric vehicles for mail delivery, energy-efficient facilities, and recycling programs. These initiatives reduce the environmental impact and enhance the postal service's public image.

Investing in Belize's e-governance and digitization sector, energy sector, and postal services presents substantial opportunities for growth and development. Belize can enhance its energy security, promote sustainability, and drive digital transformation by fostering PPPs and attracting foreign and local investments. These investments will create a more resilient, efficient, modern infrastructure, benefiting the nation.





MINISTRY OF PUBLIC UTILITIES, ENERGY, LOGISTICS & E-GOVERNANCE

Toucan Plaza, George Price Boulevard, Belmopan (+501) 822-0401/0810 info@mpuele.gov.bz

www.mpuele.gov.bz

Designed by

The Communications Unit in the Ministry