

**WATER SUPPLY AND SANITATION INFRASTRUCTURE IMPROVEMENT  
PROGRAM (GY-L1040 / GY-X1003)  
Compliance with the Public Utilities Policy (GN-2716-6)**

Conditions	Description	Comments
<b>1. Financial sustainability</b>	<p>For each operation, it will be verified that the relevant service will generate or receive sufficient funds to meet its financial commitments and cover the operating and maintenance costs of the systems related to the operation.</p> <p>When a Bank operation involves contributions of budgetary funds to subsidize the provision of a public utility service, it will be verified that:</p> <ul style="list-style-type: none"> <li>• the budgetary allocation of such contributions is transparent; and</li> <li>• its purpose corresponds with one of the following objectives: <ul style="list-style-type: none"> <li>i. Expansion of capacity to provide greater access</li> <li>ii. Increase in the quality of the existing services</li> <li>iii. Improvement in process administration and adoption of technology for the services to contribute to climate change mitigation or to the management of natural disaster risks.</li> </ul> </li> </ul> <p>When the budgetary funds represent rate subsidies, it will be confirmed that progress is made on the design and implementation of the subsidy targeting instruments that grant priority to the most vulnerable and lowest-income groups</p>	<p>GWl's operation and maintenance costs are currently covered through a combination of GOG (Government of Guyana) transfers and tariff rates. In this regard, the GOG provides promptly and periodically direct financial assistance to GWl by subsidizing the electricity cost of the company (reimbursing the energy bill from the energy company in the country – GPL<sup>1</sup>-, which is the sole official supplier of electricity in Guyana and is also wholly owned by the GOG). The aim of this financial assistance is to increase the quality of the existing services provided by GWl. However, the economic regulator (PUC) has recently approved a new tariff structure to update and rationalize the current fragmented tariff system. It is expected that the application of this tariff adjustment, together with the operational efficiencies to be achieved within GWl's Business Strategic Plan (which includes an energy reduction plan), will lead to operational financial sustainability for GWl in the medium term. Consequently, GOG subsidies for electricity will be moderately reduced after the application of the tariff adjustment and the operational efficiencies included in its Business Strategic Plan (the company is already implementing an energy reduction plan which includes increasing electromechanical efficiency of the pumps, and using of energy efficient technologies). In fact, projected results show that while GOG's subsidies for operational expenses are required in the short term, the overall trend is for a reduction of such subsidies in the medium term. It is worth mentioning that the new tariff structure promotes more affordable rates for Hinterland communities (mainly low-income communities), including some level of cross-subsidization by customers on the coast for the Hinterland operations. Additionally, the new tariff structure charges an increasing volumetric charge per cubic meter according to consumption levels.</p>
<b>2. Economic evaluation</b>	<p>Public utilities projects will be economically viable in accordance with the cost-benefit and cost-effectiveness evaluation methodologies used and accepted by the Bank.</p>	<p>A cost-benefit analysis for the main components of the program was performed using economic evaluation methodologies accepted by the Bank. The program is economically viable, showing an Economic Rate of Return (ERR) of 13.4% and an Economic Net Present Value of US\$1.8 million. The analysis was complemented by appropriate sensitivity and risk assessments. The achieved ERR can be safely regarded as the lower bound estimation. Indeed, the program displays much higher ERRs (up to 21%) if less conservative scenarios for the benefits estimation are assumed.</p>

<sup>1</sup> Guyana Power and Light INC.

Objectives of the Policy	Description	Comments
<b>1. Promote Access</b>	The Policies should promote access to the service by the entire population, including the most disadvantaged communities and groups, in both urban and rural areas.	<p>The Ministry of Housing and Water is in charge of water &amp; sanitation sector policies and, along with the Public Utilities Commission (PUC), monitors the services provided by GWI. Improvements in the supply and access to safe water and sanitation services to rural and interiors areas are critical to achieving the objectives of the Government of Guyana (GOG) in reducing poverty levels. In keeping with the mandate to promote water &amp; sanitation access to hinterland communities, there is one division within the operations department of Guyana Water Incorporated (GWI), which is aiming to improve rural and interior water supply. Furthermore, the new tariff structure promotes the provision of affordable water and sanitation services for these hinterland communities, with reasonable discrimination between customers in the hinterland and the more established communities.</p> <p>The Water Supply and Sanitation Infrastructure Improvement Program (the Program) will indirectly contribute to the promotion of access to water and sanitation services through, among others: (i) increasing the number of households with upgraded access to drinking water; (ii) increasing the continuity of water services; (iii) financing improvements in access to sanitation for low-income users, thus ensuring access to the service; and (iv) by contributing to improve GWI's operational costs which in turn, will enable funding or financing of capital expenditures that could be destined for new water &amp; sanitation services.</p>
<b>2. Deliver a reliable, quality service</b>	It is important to ensure that the service provided to the user meets minimum quality and reliability standards that are viable and consistent with a cost-benefit or cost-efficiency analysis, in keeping with the nature of the service and the supply conditions.	<p>The regulatory framework of the sector establishes that through Paragraph 13 of the License to Supply Water and Sewerage Services for public purposes, granted to GWI, the utility is required to strive for, and maintain operating standards and performance targets in accordance with the Second Schedule of the License.</p> <p>The Public Utilities Commission (PUC) is the regulatory and enforcement body charged with ensuring compliance with the established regulatory framework.</p> <p>The Program will contribute to the improvement of system reliability and quality of service through the construction and rehabilitation of water treatment plants, and the reduction of its Non-Revenue Water (NRW) levels, increasing the water samples that comply with national water quality standards. For these purposes, the selection of the areas to be rehabilitated is based on technical criterion which was used to determine the cost-effectiveness of the proposed interventions, with the objective of prioritizing the investments with the best rate of loss recovery vs. investment. Additionally, a cost benefit analysis of the Program was conducted, and an Economic Rate of Return (ERR) of 13.4% was</p>

		obtained.
<b>3. Deliver a service efficiently</b>	It is important to deliver a service efficiently, in terms of supply, while seeking to deliver the service at the least possible cost.	<p>One of the key aspects of GWI's Strategic Business Plan (2012-2016) is to minimize the cost of its operations, especially through the reduction of NRW levels and energy costs of the company.</p> <p>On this regard, an important expected outcome of the Program is the GWI's improved operational efficiency, specifically through the reduction of NRW levels in program areas. The implementation of the Program will result in an enhanced operation of the network with the aim of reducing operating costs and increase GWI's revenue through the decrease of commercial and physical losses.</p>
<b>4. Create suitable incentives for service demand</b>	The Policies should create suitable incentives for service demand, so users make use of the services in a manner consistent with their economic, financial, and environmental sustainability.	<p>In accordance with section 7 of the Water and Sewerage Act 2002, the national water policy may set out strategies, objectives, plans, guidelines and procedures to ensure, among others: i) the equitable allocation of water for the social benefit of the people of Guyana; ii) that water resources are managed and used in a sufficient and sustainable manner; iii) the environment is adequately safeguarded; iv) that communities are protected from severe hydrological events; and v) that sources of ground water are used sustainably.</p> <p>As part of its main objectives, the Program seeks to improve GWI's operational efficiency, which ultimately, would contribute to a more sustainable water &amp; sanitation supply. Such improvements, in line with GWI's plans to improve its operational performance indicators in the medium term (as established in GWI's Strategic Business Plan) are expected to result in lower production and distribution costs, together with the application of a more rationalize new tariff structure, which will create suitable incentives for service demand. The main toll used by water utilities to regulate demand and use of resources is metered billing. A water metering program has also been included in the Program.</p>
<b>5. Promote sustainability of the public utilities</b>	<p>The scope of the sustainability of the public utilities will be promoted based on three pillars:</p> <p>a. <i>Financial sustainability</i>: ensuring that there are sufficient revenues from provision of the service to the user, with the community contributions and direct contributions from the government, to cover the efficient costs of service delivery.</p> <p>b. <i>Environmental sustainability</i>: helping ensure that the selection, execution, operation, and maintenance of the service delivery projects comply with the Bank's environmental safeguards and contribute to the development of resilient infrastructure, considering viable alternatives to mitigate climate change.</p> <p>c. <i>Social sustainability</i>: helping increase access to the service and providing mechanisms to consult with the community on pertinent aspects of service delivery.</p>	<p><i>Financial sustainability</i>: GWI's operation and maintenance costs are covered through a combination of GOG transfers (done promptly and periodically) and tariff rates. Furthermore, the PUC has recently approved a new tariff structure to update and rationalize the current fragmented tariff system. It is expected that the application of this tariff adjustment, together with the operational efficiencies to be achieved within the Business Strategic Plan, will lead to financial sustainability for GWI in the medium term. Rehabilitation and improvements works under this Program are directed to improving quality of service and making it more efficient, optimizing O&amp;M costs, and improving revenue collection, all of which will contribute to the sustainability of service.</p> <p><i>Environmental sustainability</i>: Because of the main Project's potential impacts which are considered minor to moderate, readily manageable through the implementation of mitigation measures, the Program was classified as Category "B"</p>

		<p>classification under IDB's Environmental Policy (OP-703). In accordance with the Category "B" classification (B.3 and B.5), an Environmental and Social Analysis (ESA) and Environmental and Social Management Plan (ESMP) have been carried out during the Due Diligence phase in order to assess the potential main environmental and social risks of the project, including a Climate Change vulnerability, and a natural disaster risk assessment. As a result of the ESA, it has been concluded that the Program complies with applicable IDB environmental and social policies, including the Disaster Risk Management Policy. Based on the findings of the ESA, a Program's ESMP outline has been developed including specific risk and disaster mitigation measures for the design, construction and operation of the infrastructure to be developed under the Program. In addition, the Program team has agreed with GWI to include under a Program specific component the "Groundwater Action Plan". This plan will improve GWI knowledge and understanding of the groundwater sources which supply water to Georgetown and its metropolitan area, enhancing the utility's capabilities in adaptive planning, as well as in designing more resilient infrastructure.</p> <p><i>Social sustainability:</i> As referred above, and as part of the ESA preparation, it has been concluded that the Program is in compliance with the Environmental and Social (E&amp;S) policies, including the Access to Information Policy. The ESA itself has been submitted to a public consultation process through the realization of a series of workshops in the project areas during which the main findings, E&amp;S impacts, and risk and mitigation measures were shared with the communities. As a result of this process, the ESA has been updated with the inputs and feedback from local communities, and these inputs were included into the ESMP outline. More specifically and according the IDB Policies, the ESMP includes a Public Consultation and Communication Strategy for the execution and operation of the Program.</p> <p>For the project beneficiaries, it was verified that the water charge was below the limit of 5% of the household income. According to the socioeconomic survey conducted in the project area in February 2014, the average household income was GYD 95,705 per month (US\$465), and the average household income for those households in the poorest quintile was GYD 50,000 (US\$243). With the current tariff structure the water charges represent, on average, between 1% and 1.3% of the average household income (depending if the household has an unmetered or metered connection, respectively). For those families in the poorest quintile, the charge represents between 2% and 2.5% of their income. With the new tariff structure, the water charges will represent, on average, between 1.9% and 2.1% of the average household</p>
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		income (also depending if the household has an unmetered or metered connection, respectively). While for those families in the poorest quintile, the charge will represent between 3.6% and 3.9% of their income.
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Policy Principles that guide the design of the Bank's operations	Description	Comments
<b>1. Supporting the countries to address basic access needs</b>	The Bank will support the development of sustainable systems that use the combination of cost-efficiency and the most appropriate technology solutions, given the characteristics of the demand and the public utility, to address the access needs of the population, both urban and rural.	Component II of the Program will finance the rehabilitation of about 39 km of the water distribution network, and 25 km of mains rehabilitated. The selection of the zones to be rehabilitated is based on critical assessments of the most deteriorated parts of the network and will be confirmed through a NRW study. The analysis was used to determine the cost-effectiveness of the proposed interventions, with the objective of prioritizing the circuits with the best rate of loss recovery vs. investment.
<b>2. Continual improvements in the governance of public utilities will be key for increasing efficiency in service delivery and satisfactorily protecting the interests of users</b>	The Policy holds that governance for decision-making in public utilities management, as well as the policy and/or regulatory framework that regulates and supervises the utilities are the primary factors determining their performance, quality, and sustainability.	See points A to G below:
<i>A. Promoting integrity, transparency, and accountability</i>	The Bank will support the development of sustainable systems that use the combination of cost-efficiency and the most appropriate technology solutions, given the characteristics of the demand and the public utility, to address the access needs of the population, both urban and rural.	<p>GWI annual financial statements are audited by the Guyana Auditor General (Audit Office of Guyana) in accordance with International Standards on Auditing issued by the International Federation of Accountants (IFAC), and those of the International Organization of Supreme Audit Institutions (INTOSAI), which has given an unqualified audit opinion for the last year closed. The financial statements were prepared in accordance with International Financial Reporting Standards (IFRS).</p> <p>The Component III of the Program will include activities to support the building of capabilities for the periodic update of the Strategic Business Plan along with the development and update of key performance indicators (KPIs) of GWI to promote transparency in GWI operations.</p>
<i>B. Analyzing the characteristics and impacts of subsidies.</i>	The operation and financing of the services addressed by this Policy should efficiently recover service delivery costs through rates charged to users. However, this Policy acknowledges that, occasionally, financial sustainability can be achieved by supplementing the revenues earned through rates charged to users for the service with contributions from the community and direct government contributions. Where subsidies are granted, the Bank will promote both their transparent allocation and use, subject to frequent, effective accountability mechanisms. Such mechanisms will include: (i) identification and analysis of sources and beneficiaries of the subsidies; (ii) analysis of the distributive incidence of the subsidies; and (iii) quantification of the subsidy relative to macroeconomic indicators (for example, gross domestic product, total public sector expenditures) used by the Bank or by the level of government	<p>Currently GWI's total operating costs are covered through a combination of GOG transfers (done promptly and periodically) and tariff rates. GOG provides direct financial assistance to GWI by subsidizing the electricity cost, and providing funding for capital expenditures with the support of multilateral organizations (IDB, World Bank, among others).</p> <p>The PUC has recently approved a new tariff structure to update and rationalize the current fragmented tariff system. It is expected that the application of this tariff adjustment, together with the operational efficiencies to be achieved within the new Business Strategic Plan, will lead to financial sustainability for GWI in the medium term. These GOG subsidies will reduce moderately after the application of this tariff adjustment and the operational efficiencies included in its Business</p>

	granting the subsidies to report on their fiscal sustainability. In cases where rate subsidies are granted, the Bank will promote their targeting toward the most vulnerable and lowest-income groups. In addition, to the extent possible, the Bank will help countries replace rate subsidies for public utilities with income transfer mechanisms that are more direct and targeted toward the lowest-income population segments.	<p>Strategic Plan. As described above, the metering program included in the loan will improve and rationalize the water demand and consumption.</p> <p>On the other hand, the new tariff structure promotes more affordable rates for Hinterland communities (mainly low-income communities) including some level of cross-subsidization by customers on the coast for the Hinterland operations. Additionally, the new tariff structure charges an increasing volumetric charge per cubic meter according to consumption levels. Since low-income households tend to consume lower amounts of water, it is possible that those customers will be paying a tariff below the marginal cost of providing the service.</p>
<b><i>C. Separating institutional roles to improve sector governance</i></b>	Experience shows that the most effective organization for the sectors to achieve this Policy's objective is the separation of the roles of policy-maker, regulator, and service provider. In this context, the sector authority retains responsibility for policy-making and planning, the public agencies determine and oversee compliance with the regulatory system, and public or private entities are assigned responsibility for providing the service. This Policy recognizes, nonetheless, that the institutional organization cannot follow a single model, but must be adapted to the specific features of each sector and country. In several of the region's countries, responsibility for policy-making, regulation, and delivery of public utilities is based at the local (provincial or municipal) level. In these cases, where it is not necessarily optimal to separate the roles of policy-making and regulation, the Bank will promote homogeneous regulation, with adequate minimum quality parameters, rate-setting principles, supervision and control mechanisms. It will also help develop institutional mechanisms that strengthen appropriate management in the framework of local legislation.	<p>The institutional framework in Guyana separates roles and responsibilities of sector agencies. GWI is the service provider, and operates in accordance with the regulations outlined in the Water &amp; Sewerage Act 2002, under a license issued by the Ministry of Housing and Water (MOHW). This Ministry is in charge of sector policies and, along with the Public Utilities Commission (PUC), monitors the services provided by GWI. The PUC, a multi-sectoral regulatory body, has oversight for tariffs and quality of service provided by all public utilities</p> <p>The Program contributes to the strengthening of GWI's management capabilities, as part of Component III of the Loan. With the expected strengthening of GWI's management capabilities, the operational efficiency would be positively impacted, supporting for the achievement of operation and performance targets in compliance with the requirements of its license. This will also be a step forward to reach a more transparent communication system with the regulator (PUC) (regulatory accounting).</p>
<b><i>D. Establishing the most appropriate sector structure given the characteristics of the service and the objectives of the Policy</i></b>	Considering the heterogeneity of markets and services in the region, this Policy does not promote a single sector industrial organization for the delivery of public utilities, and emphasizes that regardless of the management model used, there must be good governance practices and a clear, predictable, stable regulatory framework that encourages efficiency and investment.	<p>In its current role, GWI is responsible for the provision of water services throughout Guyana and sewer services in central Georgetown, the capital city. In accordance with the Water &amp; Sewerage Act 2002, MOHW provides policy direction to GWI and is responsible for monitoring GWI's performance relative to the terms of its operating license. On the other hand, the PUC Act empowers the PUC to monitor and regulate the services provided by all utilities in Guyana. The PUC monitors, regulates and enforces GWI service standards, and recently has approved the new tariff structure to be applied to the customers.</p> <p>The Program will promote the strengthening of GWI's management capabilities and the implementation of international best practices in the operation and rehabilitation of the supply and distribution infrastructure. These improvements are expected to improve the quality and reliability of service to customers in keeping with the standards enforced by the PUC.</p>

<p><b><i>E. The role of economic regulation in creating incentives for efficiency, investment, and protection of users' rights</i></b></p>	<p>The adoption of an effective regulatory system tailored to the specific conditions of each sector in each country is a key factor for achieving the Policy's objectives. The promotion of users' rights should be a core objective of the service regulation process. Thus, regulation should ensure that the efficiency gains achieved over time by the service providers are passed on to the users through rate reductions or improvements in service quality. For this to happen, it is essential to prevent the abuse of dominant market power by the provider and strictly apply the standards for quality of service. Regardless of the sector structure and institutional regulation model selected by each country, the Bank will provide assistance in developing information systems that show policy-makers and users the structure and cost and rate levels at all stages of service production.</p>	<p>Part IV 25 (1) of the PUC Act (Service and Facilities) stipulates that public utilities are required to provide an efficient service of an adequate quality and standard. The rights of the customer to such service are also established under 25 (2). These requirements are clearly aligned with the Bank's Policy.</p> <p>The PUC has approved the new tariff structure to be applied to the customers, which update and rationalize the tariff system.</p> <p>The components of the Program are intended to improve GWI's operational efficiency. These improvements are expected to improve the quality and reliability of water &amp; sanitation service to customers in keeping with the standards enforced by the PUC. Specifically, the Component III of the program will finance activities to monitor KPIs of GWI that will support the PUC with its objective to oversight quality standards of the utility.</p>
<p><b><i>F. Creating the proper conditions so private participation in public utilities service delivery is a viable option</i></b></p>	<p>This Policy recognizes that competition has the potential to increase productive efficiency and quality of service. In markets where production technology does not exhibit characteristics specific to natural monopolies, market competition can be generated by allowing several companies to offer services simultaneously. When the markets are natural monopolies, competition for market can produce the same results as competition in the market, as long as the process of selection and regulation of the company providing the service is open and effective. The Policy also recognizes that private participation (in any of its manifestations, including management contracts, concessions, or mixed-ownership enterprises) is a key tool for closing gaps in the quantity and quality of utilities in the region.</p>	<p>GWI operates under the regulations outlined in the Water &amp; Sewerage Act 2002. Part VII 44 of this Act stipulates that the Minister may grant a license, which may be an exclusive license authorizing any person to provide potable water and sewerage services for a period which may not exceed twenty-five years, upon such terms and conditions as may be specified in the license. GWI is operating through a license provided by the MOHW which tries to function as a management contract between the MOHW and the utility, including services standards for operation and KPIs. Furthermore, in the water and sanitation sector there are an economic regulator (PUC) with specific functions to oversee tariffs and quality of service provided to the customers.</p>
<p><b><i>G. Strengthening the management of infrastructure used for public utilities service delivery</i></b></p>	<p>The most pertinent spheres of action for optimizing infrastructure management are: (i) encouraging efficiency in business management; (ii) developing and implementing appropriate, stable asset maintenance policies; and (iii) optimizing the use of the infrastructure through incentives for demand.</p>	<p>Part IV 25 (1) of the PUC Act (Service and Facilities) stipulates that public utilities are required to provide an efficient service of an adequate quality and standard; to achieve such standards prudent management of service and facilities is required</p> <p>The Program directly seeks to improve the GWI's management capabilities. Areas to be addressed include (i) operations and projects; (ii) information technology; (iii) finance and procurement; and (iv) loss reduction. In addition the Program will support strengthening of GWI's capabilities in planning and commercial management activities.</p>
<p><b>3. Promoting innovation to foster efficiency, access, and environmental sustainability</b></p>	<p>This Policy highlights the role of technology for increasing access with cost-effective solutions, reducing maintenance costs, and managing consumption, while avoiding unnecessary investments in increased capacity. The Policy recognizes that the Bank will help disseminate information on the adoption, financing, and systems for management of the most appropriate technology solutions for each particular combination of public</p>	<p>As part of its Strategic Business Plan objective, GWI is implementing and advanced metering infrastructure. Within the Program, around new 13,000 water meters will be installed, primarily for commercial customers.</p> <p>The Program also contributes to the improved GWI's capacity to manage the new assets, which will be designed using a known technology that</p>



	<p>utility and demand characteristics.</p>	<p>proved to be effective in Guyanese settings and environment.</p> <p>The expected reduction in system losses and improved demand management will result in avoided supply costs and will ultimately contribute to the sustainability of the water resources availability. Finally the inclusion of adequate technology for district meter areas and house hold meters will allow GWI to create new strategies for water network operations which will result in energy savings and improvement in the levels of service.</p>
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