



Board of Executive Directors

For consideration

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To: The Executive Directors
From: The Secretary
Subject: Panama. Loan proposal for the "Support Program for Reforms in the Water, Sanitation, and Energy Sectors II"

Basic Information: Loan type Programmatic Policy-Based Loan (PBP)
Borrower Republic of Panama
Amount up to US\$200,000,000
Source Ordinary Capital

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Remarks: As established in document GN-1838-3, "Report of the Working Group of the Board of Executive Directors of the Inter-American Development Bank on Streamlining Approval Procedures for Sovereign Guaranteed Operations. Revised version", approved on 21 June 2018, policy-lending operations are considered by the Board of Executive Directors by Standard Procedure.

This operation is the second loan in a programmatic series of two consecutive single-tranche operations, technically related to one another but independently financed as programmatic policy based loans, in accordance with document CS-3633-2, "Policy-based Loans: Guidelines for Preparation and Implementation. Update".

Reference: GN-1838-3(6/18), DR-398-18(8/18), CS-3633-2(7/18), GN-2991-1(3/20), GN-2991-3(8/20), GN-2838(11/15), CS-4338(11/20), PR-4488(7/17), DE-29/17

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PANAMA

**SUPPORT PROGRAM FOR REFORMS IN THE
WATER, SANITATION, AND ENERGY SECTORS II**

(PN-L1159)

LOAN PROPOSAL

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ABBREVIATIONS

ASEP	Autoridad Nacional de los Servicios Públicos [National Public Utilities Authority]
ATE	Agenda de Transición Energética [Energy Transition Agenda]
CONAGUA	Consejo Nacional del Agua [National Water Council]
DEM	Development Effectiveness Matrix
DIA	Development in the Americas
DISAPAS	Dirección del Subsector de Agua Potable y Alcantarillado Sanitario [Water Supply and Sanitary Sewerage Subsector Division]
ENME	Estrategia Nacional de Movilidad Eléctrica [National Electric Mobility Strategy]
ETESA	Empresa Estatal de Transmisión Eléctrica [State Electricity Transmission Company]
FACE	Fondo de Compensación Energética [Energy Compensation Fund]
FET	Fondo de Estabilización Tarifaria [Rate Stabilization Fund]
FTO	Fondo Tarifario de Occidente [Western Rate Fund]
GWh	Gigawatt-hour
IDAAN	Instituto de Acueductos y Alcantarillados Nacionales [National Water and Sanitation Administration]
IMF	International Monetary Fund
INEC	Instituto Nacional de Estadística y Censo [National Statistics and Census Institute]
JAAR	Juntas administradoras de acueductos rurales [rural water supply management boards]
koe	Kilograms of oil equivalent
MDB	Multilateral development bank
MEF	Ministerio de Economía y Finanzas [Ministry of Economy and Finance]
MiAmbiente	Ministerio del Ambiente [Ministry of the Environment]
MINSa	Ministerio de Salud [Ministry of Health]
MMT	Million metric tons
MWh	Megawatt-hour
NCRE	Nonconventional renewable energy
OECD	Organisation for Economic Co-operation and Development
PBL	Policy-based loan
PBP	Programmatic policy-based loan
PEN	Plan Energético Nacional [National Energy Plan]
PESIN	Plan de Expansión del Sistema Interconectado Nacional [Plan to Expand the National Interconnected System]
PNSH	Plan Nacional de Seguridad Hídrica [National Hydrological Security Plan]
PSP	Programa de Saneamiento de Panamá [Panama Sanitation Program]
PUP	Public Utilities Policy
SIEPAC	Sistema de Interconexión Eléctrica de los Países de América Central [Central American Electric Interconnection System]
SNE	Secretaría Nacional de Energía [National Energy Department]
SNT	Sistema Nacional de Transmisión [National Transmission System]

TCO ₂	Tons of carbon dioxide
UREE	Uso racional y eficiente de la energía [rational and efficient energy use]
W&S	Water and sanitation

PROJECT SUMMARY

PANAMA SUPPORT PROGRAM FOR REFORMS IN THE WATER, SANITATION, AND ENERGY SECTORS II (PN-L1159)

Financial Terms and Conditions				
Borrower			Flexible Financing Facility ^(a)	
Republic of Panama			Amortization period:	20 years
Executing agency			Disbursement period:	1 year
Ministry of Economy and Finance			Grace period:	5.5 years ^(b)
Source	Amount (US\$)	%	Interest rate:	LIBOR-based
IDB (Ordinary Capital):	200 million	100%	Credit fee:	(c)
			Inspection and supervision fee:	(c)
Total:	200 million	100%	Weighted average life:	12.75 years
			Currency of approval:	United States dollars
Project at a Glance				
<p>Project objective/description: The program’s general objective is to contribute to the sustainability of the energy sector and to increased coverage and improved management of water supply and sanitation services through a series of policy reforms aimed at strengthening and supplementing the regulatory and institutional framework of the energy and water and sanitation sectors. The specific objectives are to: (i) improve energy security through energy matrix diversification, energy efficiency, and regional integration; (ii) improve the financial and social sustainability of the energy sector and ease the fiscal burden by reducing the cost of subsidies in the sector and targeting them more effectively; (iii) strengthen institutions in the areas of energy planning and purchasing; and (iv) improve interagency coordination in the water and sanitation sector with defined strategic planning and clear assignment of roles of all sector agencies.</p> <p>This loan operation is the second of two operations that are technically linked and financed independently under the programmatic policy-based loan modality.</p>				
<p>Special contractual conditions precedent to the sole disbursement of the loan proceeds: Disbursement of the Bank loan proceeds will be subject to fulfillment of the policy reform commitments described in the program components and set out in the Policy Matrix (Annex II), in addition to fulfillment of the other conditions established in the Loan Contract (see paragraph 3.3).</p>				
<p>Exceptions to Bank policies: None.</p>				
Strategic Alignment				
Challenges: ^(d)	SI	<input checked="" type="checkbox"/>	PI	<input checked="" type="checkbox"/>
Crosscutting themes: ^(e)	GD	<input checked="" type="checkbox"/>	CC	<input checked="" type="checkbox"/>

(a) Under the terms of the Flexible Financing Facility (FFF) (document FN-655-1), the borrower has the option of requesting changes to the amortization schedule as well as currency, interest rate, and commodity conversions. The Bank will take operational and risk management considerations into account when reviewing such requests.

(b) Under the flexible repayment options of the FFF, changes to the grace period are permitted provided that they do not entail any extension of the original weighted average life of the loan or the last payment date as documented in the Loan Contract.

(c) The credit fee and inspection and supervision fee will be established periodically by the Board of Executive Directors as part of its review of the Bank's lending charges, in accordance with the relevant policies.

(d) SI (Social Inclusion and Equality); PI (Productivity and Innovation); and EI (Economic Integration).

(e) GD (Gender Equality and Diversity); CC (Climate Change and Environmental Sustainability); and IC (Institutional Capacity and Rule of Law).

I. DESCRIPTION AND RESULTS MONITORING

A. Background, problem addressed, and rationale

- 1.1 **Macroeconomic conditions and context.**¹ In the past 15 years, Panama has posted one of the world's highest growth rates with an annual average of 6.8%, which has enabled it attain, together with Chile, the highest per capita income in Latin America in purchasing power parity and the status of high-income country.² The Canal expansion, combined with other large-scale civil works, was the catalyst for Panama's economic boom. The greatest contribution, however, is from private investment, targeted mainly to construction and the real estate sector. Two other areas that stand out are logistics, where the country has very clearly gained strength over that time span, establishing itself as a hub, and the tourism sector, where exports tripled between 2008 and 2019 to reach 6.8% of GDP. The supply of gas and electricity also expanded significantly, increasing from 2.4% to 3.8% of GDP between 2007 and 2018. By contrast, Panama is a net importer of fuels at around 3.2% of GDP.
- 1.2 During this period, the country also strengthened its macroeconomic framework. Inflation has been one of the lowest in the region, the nonfinancial public sector deficit has remained at moderate levels, and the debt-to-GDP ratio decreased from 79.9% in the 1990s to 38.4% on average in 2015-2018. All this has made it possible for Panama to achieve and maintain investment grade status since 2010. Lastly, the financial system has remained healthy, according to the standard metrics of liquidity, returns, and arrears. However, following completion of the Canal expansion in 2016, the country's economy had begun to show signs of slowing. In 2010-2014, the GDP growth rate averaged 7.8%, falling to 4.9% in 2015-2018, and to 3% in 2019, the lowest in a decade. The public finances have also deteriorated recently, partly as a consequence of the loss of economic momentum. The nonfinancial public sector deficit widened from 1.8% in 2016 to 3.1% in 2019, and debt rose from 37.4% of GDP in 2016 to 44.7% in January 2020.³
- 1.3 Like other countries, the current COVID-19 crisis will have a deep impact on the economy of Panama, as it has been among the world's countries with the highest number of cases per 100,000 inhabitants and the strictest lockdown measures. All of this means that Panama will have negative growth in 2020 for the first time since the 1988 crisis. The International Monetary Fund (IMF) projects a 9% decline in 2020 and a 4% recovery in 2021. The decrease in government revenue and the foreseeable increase in spending suggest that the deficit and debt in 2020 will rise substantially (to 9% and 55%, respectively, according to IMF forecasts). However,

¹ Data from the National Statistics and Census Institute (INEC); tax data from Panama's Ministry of Economy and Finance (MEF).

² World Bank classification.

³ In late 2019, the Ministry of Economy and Finance (MEF) issued bonds as prefunding for repayment of debt maturing in January 2020.

the country has maintained access to international financial markets and has retained investment grade status.⁴

- 1.4 The crisis caused by COVID-19 exposes the great challenges facing residential public utilities in the region and has amplified some of them due to a lack of institutional coordination and operational inefficiencies. Given the strategic nature of these utilities in dealing with the pandemic, most countries of the region, including Panama, declared their continued service delivery essential to controlling the health emergency, and temporarily extended subsidies to support the population.⁵ The lockdown measures increased demand for such utilities in households and reduced their consumption in the nonresidential sector.⁶ Total demand for electricity fell 9% from March to June 2020.
- 1.5 **Regulatory framework and organization of the energy sector.** Law 6/1997 establishes the regulatory and institutional framework for electricity service. The National Energy Department (SNE) is responsible for formulating policies. The electricity subsector is regulated by the National Public Utilities Authority (ASEP). Law 8/1987 and Cabinet Decree 36/2003 specify the policies, conditions, and entities responsible for the regulation and control of the hydrocarbon subsector. Various laws and regulations exist for promoting generation based on: (i) natural gas (Law 41/2012); (ii) hydroelectricity and other renewable energies (Law 45/2004); (iii) solar power plants (Law 37/2013); (iv) wind power plants (Law 44/2011, amended by Law 18/2013); and (v) biofuels and biomass (Law 42/2011). Law 69/2012 establishes national policy guidelines for Rational and Efficient Energy Use (known by the Spanish-language acronym, UREE) and gave rise to the UREE Fund.⁷ Technical regulations on energy efficiency in air conditioners and sustainable construction entered into force in 2020. The Rural Electrification Office, reporting to the Ministry of the Presidency,⁸ is responsible for expanding electrification into nonconcessioned rural areas.
- 1.6 **Energy sector situation.** In 2019, the energy matrix comprised: 56% petroleum derivatives (imported liquid fuels), 18% renewable energy, primarily hydroelectricity, 14% natural gas, and 12% coal.⁹ Between 2014 and 2019, the share of natural gas grew 14%, displacing petroleum derivatives. The transportation sector was the main energy consumer (46%), followed by industry (21%), trade (17%), and residential (15.5%). Carbon dioxide (CO₂) emissions totaled 9.3 million metric tons (MMT),¹⁰ a reduction of 0.7 MMT between 2014 and 2019.

⁴ International bond issuance in the amount of US\$2.5 billion on 26 March. On 21 September, the MEF allocated US\$2.575 billion.

⁵ IDAAN temporarily suspended cuts (Resolution 16, 24 March 2020).

⁶ Law 152, 4 May 2020, suspension of payment for energy services until September 2020.

⁷ Law 69/2012, legal framework on energy efficiency actions introduced by the government, regulations on air conditioners and on sustainable housing. The UREE Fund does not have capital allocated to begin operations; a financing mechanism is under consideration.

⁸ As of January 2021, the Office of Rural Electrification will report to the Ministry of Public Works.

⁹ SNE, National Energy Balance, 2019; Economic Commission for Latin America and the Caribbean (ECLAC), 2019.

¹⁰ Latin American Energy Organization, 2018. Transportation (53%) and electricity generation (21%).

- 1.7 **Electricity subsector.** In 2019, 11,642 GWh were generated:¹¹ 43.8% from hydroelectricity, 24.2% from natural gas, 23.2% from coal and diesel, 6.2% from wind, and 2.5% from solar. Since 2015, the share of hydroelectricity decreased 13.9%, generation with liquid fuels decreased 10.8%, and natural gas increased 24.2%. Imports rose 2.8%. Between 2015 and 2018, generation with natural gas displaced generation with diesel and bunker fuel, with a net reduction in emissions¹² from 2.67 MMT to 1.96 MMT of CO₂.¹³
- 1.8 The 2015-2050 National Energy Plan (PEN) projects that demand for electricity will double to 19,000 GWh¹⁴ by 2030, representing annual growth of 5.2%, as a result of population and GDP growth and the development of large infrastructure projects.¹⁵ The Plan to Expand the National Interconnected System (PESIN 2019-2033) proposes an indicative plan for the expansion of generation and transmission to optimize the supply of electricity at a lower cost, considering quality, reliability, and security criteria. It also proposes that demand be met through efficient use of energy resources. The PESIN considers nonconventional renewable energy (NCRE)¹⁶ as well as hydroelectric energy and natural gas in the expansion.
- 1.9 The National Transmission System (SNT) is responsible for the state electricity transmission company Empresa Estatal de Transmisión Eléctrica (ETESA). In 2018, there were 3,088 km of double-circuit lines. Between 2016 and 2017, ETESA built a third transmission line to improve SNT capacity and reliability, enabling the country to fulfill the expansion commitments under the Central American Electric Interconnection System (SIEPAC). The following three companies are in charge of electricity distribution: Empresa de Distribución Eléctrica Metro Oeste, S.A., Elektra Noreste, S.A., and Empresa de Distribución Eléctrica Chiriquí, S.A.
- 1.10 **Rates and subsidies in the energy sector.** The rate schedule establishes that supply costs must be efficient, which has favored a gradual reduction in rates.¹⁷ The rates are set to cover all costs of supplying the electricity, but there are still contributions from the government to subsidize some consumers, mainly residential and low-use. The government has been taking action to rationalize subsidies and target them to low-income users. For example, in 2015 it eliminated

¹¹ Private generators (93.4%), government generators (5.8%), and 0.8% from SIEPAC imports.

¹² A net reduction in greenhouse gas emissions occurs when more polluting fuels are replaced with natural gas. In the long term, investments in natural gas may not be fully aligned with the Paris Agreement due to emissions from natural gas production and use. The Bank will support a study to assess whether these investments pose a potential risk of stranded assets for the country and to identify actions to mitigate this risk.

¹³ Latin American Energy Organization (OLADE), 2018.

¹⁴ An additional 1,000 MWh is expected to be provided by new hydroelectric plants. 2015-2050 National Hydrological Security Plan (PNSH).

¹⁵ Fourth bridge over the Canal and expansion of the metro, among others.

¹⁶ Solar, wind, and biomass.

¹⁷ In 2015, Panama had one of the highest rates for electric power in Central America. In 2017, the average was US¢16.4/kWh, below the average for Central America.

- the Energy Compensation Fund (FACE), which supported the stabilization of electricity rates, subsidizing all users, including industrial and commercial ones.
- 1.11 There are still two subsidies in place. The Rate Stabilization Fund (FET) was created in 2004 to cushion the impact of the oil price on electricity rates. In 2015, the FET was limited to users with consumption of up to 300 kWh/month, a threshold that encompasses 75% of customers, accounting for 23.5% of sales. In March 2020, due to the pandemic, the government temporarily instituted a special FET subsidy¹⁸ thru December 2020. The second subsidy, the Western Rate Fund (FTO), was created in 2015 to guarantee the stability of rates of Empresa de Distribución Eléctrica Chiriqui S.A. without affecting the revenue of this distributor, which has higher costs due to the low population density of its concession. The FTO is valid until the end of 2020. Total subsidy transfers from 2009 to 2019 totaled US\$1.728 billion (52% from the FET). In 2019, US\$176.3 million corresponded to the FET, and US\$33.5 million to the FTO.¹⁹ For 2020, the total amount is estimated at US\$250 million because of the pandemic.
- 1.12 The government also subsidizes the price of 25-pound cylinders of liquefied petroleum gas, which has held steady at US\$4.37 since 1993, the difference being relative to the import parity price contributed by the national government. Cylinder demand doubled between 2010 and 2018, an increase not linked to population growth.²⁰ This subsidy has been extended over time and represented a government contribution of US\$98.5 million in 2018 and US\$77 million in 2019.
- 1.13 **Natural gas.** In 2018, the energy matrix was diversified with the use of natural gas for electricity generation (paragraphs 1.6 and 1.7). The first phase of the 381 MW natural gas generation plan,²¹ launched in 2015, became operational in August 2018, supporting the reduction of the electricity generation emissions factor.²² The installed regasification and storage terminal meets the plant's needs and provides a reserve to cover other services in the country and region, making Panama an energy hub.
- 1.14 **Energy sector challenges.** The challenges are: (i) strengthening the regulatory framework and coordinated planning between subsectors to support energy diversification, emissions reduction, and sustainability,²³ considering new technologies and natural gas as part of the energy matrix; (ii) continuing with expansion and diversification of NCRE generation, considering the high share of hydroelectricity and growing demand; (iii) guaranteeing supply security according to criteria used in the PESIN; (iv) strengthening the SNT, so that the transport of

¹⁸ The special FET covers 50% of consumption up to 300 kWh, and 30% of consumption from 301 kWh to 1,000 kWh.

¹⁹ ASEP, August 2020.

²⁰ Subsidy created for households. However, due to the indiscriminate sale of 25-pound cylinders, there is uncontrolled use by some other sectors, such as the commercial sector.

²¹ The second phase of the project entails a storage tank that supplies liquefied natural gas to generate electric power from the plant.

²² Emissions factor: bunker fuel 0.65 TCO₂ per MWh produced, diesel 0.78 TCO₂/MWh, coal 1.23 TCO₂/MWh, and natural gas 0.39 TCO₂/MWh.

²³ Economic and financial, social, environmental (including climate resilience), and institutional sustainability.

hydroelectric generation or regional exchanges is not affected, through construction of the fourth transmission line; (v) implementing operational flexibility measures to increase the share of NCRE, including storage, demand management, and improvement in load distribution procedures;²⁴ (vi) developing information systems and studies to support targeting of subsidies, including the use of new technologies; and (vii) developing incentives and programs to promote energy efficiency.

1.15 Regulatory framework and organization of the water and sanitation sector.

Decree-Law 2 of 1997 establishes the institutional and regulatory framework for water and sanitation (W&S) service delivery, assigning regulatory functions and responsibilities to the Ministry of Health (MINSA) through the Water Supply and Sanitary Sewerage Subsector Division (DISAPAS). The law assigns regulatory functions to ASEP, and makes the National Water and Sanitation Administration (IDAAN) responsible for the delivery of W&S services to communities with more than 1,500 inhabitants. The rural water supply management boards (JAARs) provide the service to communities of fewer than 1,500 inhabitants, with technical assistance from MINSA. In addition,²⁵ the Panama Sanitation Program (PSP)²⁶ execution unit was tasked with executing and operating sanitation works throughout the country and was assigned responsibility for the main infrastructure of the sanitary sewer system in the Panama City Metropolitan Area. Other key actors are the Ministry of Economy and Finance (MEF), which allocates financial resources and subsidies to the sector; the Ministry of the Environment (MiAmbiente), the apex agency for water, which regulates the use of the resource and protects it for W&S; and the National Council for Sustainable Development, the executing agency of urban and rural W&S projects. The National Water Council (CONAGUA), which reports to the Ministry of the Presidency, is in charge of coordinating and guaranteeing the development and implementation of the 2015-2050 National Hydrological Security Plan (PNSH).²⁷

1.16 Current situation and challenges of the W&S sector. Panama is one of the countries with the lowest hydric stress in the world, as it has abundant and constant water resources on a year-on-year basis.²⁸ However, it uses only about 25.8% of the total supply, and the year-on-year variability affects resource availability throughout the year, a problem that is expected to increase with the impact of climate change. The availability of water resources increased between 2015 and 2018, reaching a supply of 122,473 cubic meters by 2018.²⁹ Demand, meanwhile, is estimated to increase to 30.26% in 2020 and 41.18% by 2050, with a 58.8% surplus.³⁰ This apparent abundance is only assuming steady annual precipitation,

²⁴ International Renewable Energy Agency (IRENA), 2018. [Renewables Readiness Assessment. Panama.](#)

²⁵ Executive Decree 18 of 3 March 2016.

²⁶ Created in 2001 and reporting to MINSA until 2019, the PSP execution unit was moved to the Ministry of the Presidency in 2020 and will again report to MINSA in 2021, Executive Decree 592, September 2020.

²⁷ [2015-2050 National Hydrological Security Plan. "Water for All".](#)

²⁸ [El agua en la economía de Panamá. IDB 2020.](#)

²⁹ Voluntary National Review of the Sustainable Development Goals, Panama, 2030.

³⁰ 2015-2050 PNSH.

since there is a trend towards considerable year-on-year variability in rainfall. This is why efficient policies are required for decision-making, as are the design and construction of resilient systems and infrastructure appropriate for adaptive management of water resources, given high year-on-year variability and climate change conditions. This is to reduce the current vulnerability to such impacts on resource availability. There are wide gaps in drinking water and sanitation coverages between urban and rural areas. Panama has a total population of 4,246,439 inhabitants, 68.1% of whom urban, and 31.9% rural.³¹ In 2018, national drinking water coverage was 94.1%, with 98.8% urban and 84% rural. National sanitation coverage is 71.4%, with 85.1% in urban areas and 41.8% in rural areas.³² Service quality at the national level is low; during the dry season, just 71% of the population whose source of drinking water is piped receives the service 24 hours a day.³³ There are also access gaps according to economic status: 80% of people living in poverty have access to water, compared to 97% of nonpoor.

- 1.17 **Management of W&S services.** IDAAN faces challenges in its operational indicators, including: (i) a 71.7% micromasurement index and 52% micrometer reading, which along with low rate charges, affect the population's high consumption.³⁴ This, combined with the high amount of nonrevenue water on the order of 40%,³⁵ causes the production provision to reach an annual average value of 507 liters per inhabitant per day, more than two and a half times the world average; (ii) operating cost coverage index with 52% operating income in the last closed fiscal year,³⁶ receiving transfers from the national government to cover investment activities and the operating cost deficit; and (iii) high electric power costs (20% of total operating costs³⁷) due to inefficiencies in electromechanical installations.³⁸ At the rural level, there are limitations in the management of rural aqueducts due both to the inefficiency of the JAARs and to the weak technical assistance provided by DISAPAS, resulting in poor service quality. There is also an unequal participation of women in executive positions on JAARs; of the 2,380 JAARs registered, only 25% have women on the executive board.³⁹
- 1.18 **Determinants of problems in the W&S sector.** The main determinants of W&S service delivery quality and coverage issues are: (i) shortcomings in sector management, especially in terms of interagency coordination and strategic planning, as well as weaknesses in the performance of sector agencies

³¹ [Total population in Panama, World Bank.](#)

³² Sustainable Development Goals, Panama, 2030. Joint Monitoring Programme: Latin America and the Caribbean, drinking water coverage 96% total, 99% urban, and 86% rural; sanitation coverage 86% total, 90% urban, and 68% rural.

³³ INEC, Volume III: Housing and Household Characteristics, 2010.

³⁴ IDAAN Statistical Bulletin, 2019.

³⁵ IDAAN Statistical Bulletin, 2019. Estimated higher due to low percentages of effective micromasurement.

³⁶ IDAAN Financial Statements, 2019.

³⁷ IDAAN Statistical Bulletin, 2019.

³⁸ Energy audit, carried out with ATN/SF-10909-, electric power expenditure, Costa Rican Water and Sewer Institute, 12% total operating costs.

³⁹ [Rural Water and Sanitation Information System.](#)

(paragraph 1.15); moreover, the lack of interagency coordination affects the prioritization and allocation of resources, which makes it hard to reduce geographical and socioeconomic disparities; (ii) low service management capacity (paragraph 1.17); and (iii) absence of coordination and information systems that would contribute to the country's water security through greater knowledge of the condition of watersheds⁴⁰ and coordination of risk management among the different actors.⁴¹

- 1.19 **Sector knowledge.** In the energy sector, the Bank has supported Panama in improving the sector's sustainability and closing the access gap. In recent years, the Bank has approved three loan operations: (i) Public Utilities Sustainable Development Support Program (4234/OC-PN); (ii) Sustainable Rural Electrification in Panama Program (3165/OC-PN and 3166/CH-PN); and (iii) Universal Access Program (4790/OC-PN). The loans for rural electrification are cofinanced with the governments of China and Spain. There are also nonreimbursable technical cooperation operations in support of the sector. Furthermore, IDB Invest approved a loan (3477D/CA-PN-1, 3477D/CA-PN-2) to Divisa Solar S.A. for a 9.9 MWp photovoltaic solar plant. The Bank supports regional integration through SIEPAC financing and studies on the Panama-Colombia electrical interconnection. The advances in energy efficiency and electric mobility are the result of mutually complementary IDB and World Bank support lines.
- 1.20 The Bank has supported the W&S sector in recent years in a coordinated manner with cofinancing from other multilateral lenders and the country's efforts (see footnotes 42, 43, 44, and 47) to increase service access and efficiency in operational improvement and strengthening of operators by executing the following loan operations: (i) Multiphase Drinking Water and Sanitation Investment Program, Phase II;⁴² (ii) Panama City and Bay Sanitation Program, Phase II;^{43 44} (iii) Sanitation Program for the Districts of Arraiján and La Chorrera, Stage I;⁴⁵ (iv) IDAAN Operational Management Improvement Program in the Panama City Metropolitan Area;⁴⁶ (v) Resilient Urban Watershed Program;⁴⁷ and (vi) Rural and

⁴⁰ The absence of a National Information System on water resources makes it impossible to: (i) make decisions based on the condition of watersheds; and (ii) execute sustainable and resilient medium- and long-term planning.

⁴¹ Implementation of decentralized risk management actions, sectoral collaboration, and mechanisms for targeted initiatives at the local and community level.

⁴² Loan 3002/OC-PN.

⁴³ Loan 3506/OC-PN. Cofinanced, Development Bank of Latin America, European Investment Bank.

⁴⁴ Loan 3506/CH-PN. Cofinanced, IDB/China Fund.

⁴⁵ Loan 3799/OC-PN. Cofinanced: Spanish Agency for International Development Cooperation (AECID), Development Bank of Latin America (CAF), European Investment Bank (EIB), and Central American Bank for Economic Integration (CABEI).

⁴⁶ Loan 4434/OC-PN.

⁴⁷ Loan 4704/OC-PN.

Indigenous Water and Sanitation Program.⁴⁸ It also provides support through nonreimbursable technical cooperation operations.

- 1.21 The Bank has extensive experience in supporting policy reforms in the energy and W&S sectors. In energy, the most recent operations are: Ecuador (5044/OC-EC); Colombia (4773/OC-CO), Dominican Republic (4649/OC-DR), and Guyana (4698/BL-GY). In the W&S sector, it has recent experience in Bolivia (3667/BL-BO and 4769/OC-BO), Haiti (3176/GR-HA), and Honduras (4878/BL-HO and 4879/KI-HO).
- 1.22 **Lessons learned in the energy and W&S sectors.** The following policy reform programs financed by the Bank were incorporated in preparation for this operation: (i) strengthen coordination among sector actors; (ii) support and finance institutions in the development of new regulatory instruments with performance improvement programs; (iii) link investment loan programs with reform programs to strengthen results and impacts; (iv) strengthen information systems and the definition of indicators for monitoring and evaluation; and (v) provide medium- and long-term support in the process to achieve financial sustainability.
- 1.23 **Government strategy in the energy and W&S sectors.** The Government of Panama has been implementing significant reforms aimed at promoting energy security and diversification of the energy matrix through the promotion of energy efficiency, the development of renewable energy (paragraph 1.5), the introduction of natural gas (paragraph 1.13), and regional electrical interconnection, as well as improved targeting of subsidies to the sector (paragraph 1.9). With regard to planning, the SNE issued the 2015-2050 PEN, as the roadmap for Panama's energy policy, updated in 2017. The government is also prioritizing the implementation of policy measures to: (i) strengthen the sector's institutional capacity for planning, regulating, and managing the operation, and enhancing the mechanism for long-term power purchasing, to encourage competition among technologies; (ii) diversify the energy matrix to increase supply, while reducing dependency on hydrological sources, by promoting a competitive increase in the use of renewable energy and natural gas, improving regulations for demand management with energy efficiency, and increasing regional exchanges; (iii) improve the sector's financial sustainability by rationalizing subsidies and making the rate structure more efficient; and (iv) reduce the access gap.
- 1.24 For W&S, some of the major areas of strategic focus listed in the National Strategic Plan with the National Government's Vision, Panama 2030, include environmental sustainability, setting out the water resources strategy and integrated watershed management in order to guarantee the availability of quality drinking water and basic sanitation for the entire population. The 2015-2050 PNSH "Water for All" establishes policies, major thematic areas, and an action plan to ensure that water is available in a quantity and quality acceptable to all users, especially for human consumption. The PNSH creates the National Water Council (CONAGUA), chaired by the Ministry of the Presidency, to which its Technical Secretariat also

⁴⁸ Grant GRT/WS-13329-PN. Nonreimbursable financing, Spanish Cooperation Fund for Water and Sanitation in Latin America and the Caribbean (FECASALC).

reports. CONAGUA comprises the MEF, MiAmbiente, the Ministry of Agricultural Development, MINSA, ASEP, the Panama Canal Authority, and IDAAN. CONAGUA provides impetus and guidance, and coordinates and guarantees the development and implementation of the PNSH.

- 1.25 Hydroelectric power accounts for 43.8% of Panama's electricity generation. In that respect, the PNSH (challenge N2) acknowledges the importance of integrated water resource management at the watershed level to guarantee the sustainability of water resources and of energy sector activities. It also recognizes the potential of this approach to contribute to the adaptation of both sectors to the observed and anticipated impacts of climate change. The PNSH incorporates aspects of water and energy security, guaranteeing a multisector response to the long-term challenges of climate change on water availability.
- 1.26 **Energy Transition Agenda.** The Strategic Guidelines of the Energy Transition Agenda (ATE) were put out for public consultation in July 2020. The ATE is part of the commitment to comply with the Paris Agreement, considering the advances in technology, regulation, and world energy supply. It sets out the guidelines for an orderly transition towards the sector's decarbonization, including NCRE and energy efficiency, and considering supply security, which would require including natural gas in the matrix, instead of coal and oil. In the electricity sector, the ATE proposes changes in the model, adding concepts such as decarbonization, decentralization, democratization, and digitalization, with specific proposals for universal access, energy efficiency, electric mobility, distributed generation, and innovation. For hydrocarbons, it identifies adjustments to strengthen regulatory and inspection capacity for better fuel quality and price and to improve their contribution to job creation. In this subsector, it proposes: (i) to define a national hydrocarbon policy that promotes competition; and (ii) modernize the regulatory framework for hydrocarbons.
- 1.27 **Program progress.** In the energy sector, the policy conditions supported under the first operation were to improve the institutional framework and planning, efficiency, and sustainable development, including: (i) strengthened planning through the 2015-2050 PEN; (ii) the proposal to modify generation contracting specifications to include NCREs; (iii) subsidy targeting in the electricity sector and a study on the new rate structure; (vi) the design of the action plan for the institutional strengthening of energy efficiency, as well as technical regulations for energy efficiency in air conditioners; (iv) the reinforcement of the SNT to promote integration; and (v) the preparation of the draft law on natural gas. The result was reduced energy consumption, diversification of the matrix with NCREs, and increased energy marketed with SIEPAC. The Energy Compensation Fund (FACE) was also eliminated.⁴⁹
- 1.28 The second operation builds on these commitments and includes policy actions that strengthen sector planning, as well as incentives for a more efficient

⁴⁹ Between 2015 and 2019, energy intensity decreased from 0.7 to 0.62 kilograms of oil equivalent (koe/US\$), NCRE and natural gas capacity grew from 248 MW to 455 MW and from 0 MW to 381 MW, respectively, and energy sales with SIEPAC increased from 300 GWh to 482 GWh. Some targets are not expected to be reached in 2020 due to lower-than-projected demand. The economic situation prevented subsidy targeting for consumption ranges below 300 kWh/month.

- and sustainable matrix. These include: (i) the ATE, which envisages a roadmap for an orderly transition to decarbonization of the energy matrix; (ii) the National Electric Mobility Strategy (ENME), which provides for actions to promote electric mobility in the public and private sectors, and supports the reduction of fossil fuels and their emissions;^{50 51} and (iii) studies to support the rationalization of subsidies in a cost-effective way using new technologies, such as photovoltaic generation.⁵²
- 1.29 In the W&S sector, the PNSH was approved under the first operation. This plan contributes to the management of actions and investments made by various institutions, offering them a holistic vision of water resources and identifying five major areas of action and respective targets, to bring the actions under this second operation into alignment with a medium- and long-term strategy. Moreover, CONAGUA was created to promote interagency coordination and decision-making and to mandate strategic planning. Accordingly, and given that the programmatic series was designed in two phases from the outset, these commitments were strengthened and expanded in the second operation.
- 1.30 To strengthen the improvement and consolidation of the sector's institutional capacity, steps were taken to ensure that the PNSH is executed and that the CONAGUA Technical Secretariat has the budget resources to perform its functions. Support was also incorporated to institutionalize the delivery of sanitation services (system expansion, operation, and maintenance) by strengthening the PSP coordination unit in MINSA, integrating in recent years a series of responsibilities linked to the administrative and operational management of this program. For this reason, it was strengthened in various respects and, in particular, in this operation with MINSA's commitment to provide the PSP with the financial, human, technological, and material resources necessary for proper operation and continuous improvement. Priority themes were also approved to achieve water sector objectives, as was the CONAGUA action plan for improved governance.
- 1.31 To promote efficient management of W&S services, the following commitments were added: (i) contribute to improving drinking water service quality for the population of the Panama City Metropolitan Area by having IDAAN begin the process of hiring a water and sanitation service operator to provide it with technical assistance in technical, commercial, administrative, and planning aspects; (ii) approve a strategy for IDAAN's financial stability in the medium and long term, focused on greater operating cost efficiency and higher operating revenue; (iii) approve a plan to improve service for users with disabilities as part of IDAAN's inclusion policies; and (iv) approve technical standards for the design and construction of rural aqueducts, to establish the applicable minimum engineering

⁵⁰ The National Electric Mobility Strategy (ENME) would decrease fuel consumption from 8% to 14%, reducing CO₂ emissions by between 2.3% and 4.3% annually in the transportation sector.

⁵¹ IDB report ["From Structures to Services: The Path to Better Infrastructure in Latin America and the Caribbean" \(Development in the Americas \(DIA\) 2020\)](#). It is viable to promote electric mobility, including in countries where coal is used to provide the last MWh of electricity, provided that efforts are also made towards decarbonizing electricity generation.

⁵² In line with the strategy of many countries around the world. "As the costs of renewables plummeted, the world moved from specific support mechanisms that relied on high levels of direct government subsidies to more competitive tools" ([DIA 2020](#)).

requirements for ensuring their structural safety and stability, according to the specific conditions of the project site, and approve an aqueduct governance strategy with a gender perspective.

- 1.32 The following commitments were added to contribute to water security: (i) create an Interagency Coordinating Committee to structure the National Water Resource Information System, which will foster better short-, medium-, and long-term management and planning;⁵³ (ii) increase water availability by conducting studies on multipurpose projects, increasing the volume of water used;⁵⁴ (iii) approve a National Water Culture Program in Panama, which will formulate, promote, and strengthen a culture of proper water use, conservation, and management throughout the country, with the organized, collaborative involvement of different institutions in the water sector; and (iv) approve the governance strategy for managing risks related to extreme hydrometeorological events.
- 1.33 The first operation and the technical cooperation operations have readied the Government of Panama with the PNSH and support for operation and maintenance of the new sewer and wastewater treatment systems, and enabled it to assume the commitments of this second operation, in order to develop and approve policy reforms through a problem analysis, dialogue, consultations, and consensus with the actors involved, led by CONAGUA, and with the participation of the other sector entities. Furthermore, the support provided through the technical cooperation operations enabled sector teams to resolve technical and operational issues, allocate resources for their implementation, and secure the support of sector instruments. The gains made have been through effective dialogue in building consensus among the various stakeholders, such as support for the process for IDAAN's operational enhancements, efficiency, and financial sustainability.
- 1.34 **The program's strategy and additionality.** The Bank has been providing ongoing support to the Government of Panama in the energy and water and sanitation sectors through actions under investment programs (paragraphs 1.19 and 1.20) with strong institutional strengthening components, nonreimbursable funding under support TCs, and policy-based loans, which in this case have been structured as a series of two programmatic loan operations entailing policy reforms in the two sectors, supporting the government's public utilities reform agenda through the implementation of short- and medium-term sequential measures (see document CS-3633-2). This operation will thus build on and expand several policy actions, such as the impact evaluation of National Electric Mobility Strategy (ENME) and the study to reduce subsidies with distributed generation, both with Bank support. The Bank has also been assisting in development of the Energy Transition Agenda (ATE), particularly by supporting three of its key strategies (universal access, distributed generation, and energy hub). In the water and sanitation sector, moreover, the Bank is supporting IDAAN's operational and efficiency enhancements through the incorporation of a specialized operator. In summary, the proposed policy reforms strengthen the country's commitment to improving the operations, institutional coordination, and strategic planning of

⁵³ In line with the new paradigm of water management under the [DIA 2020](#).

⁵⁴ The volume of water used currently stands at 25%.

institutions related to the two sectors, as well as achieving universal access to W&S services and reducing inequities.

- 1.35 **Effectiveness of sector policy reforms.** According to the Organisation for Economic Co-operation and Development (OECD),⁵⁵ the energy and W&S sectors are highly sensitive to, and dependent on, the various levels of governance in a country. Water connects across sectors, places, and people, and the geographic boundaries of watersheds usually do not match administrative boundaries. The energy and W&S sectors are also capital-intensive, and some subsectors are a monopoly with market failures that require planning, coordination, governance, and monitoring. The OECD lists three principles for effective governance of these sectors: (i) effectiveness, through public policies and regulations that define targets, roles, and responsibilities; (ii) efficiency, through instruments that help maximize the benefits of access to W&S and energy at the lowest possible cost, promoting financial sustainability, and with planning instruments; and (iii) effective service management.
- 1.36 **The Bank's country strategy.** Both the energy and the W&S component fall within the framework of the Bank's Country Strategy with Panama 2015-2019 (document GN-2838) through its priority objective of "enhancing the logistics services, efficiency, and connectivity of the productive infrastructure" by promoting the most efficient use and exchange of energy at the regional level. The W&S component does this by contributing to the strategic objective of "improving the delivery of basic services to the population living in poverty," as the plans and policies supported through this operation will increase and improve W&S service delivery. The operation is included in the 2020 Operational Program Report (document GN-2991-1).
- 1.37 **Strategic alignment.** The program is consistent with the Second Update to the Institutional Strategy 2020-2024 (document AB-3190-2) and is aligned with the development challenges of: (i) productivity and innovation, by supporting the development of electric mobility and renewable energy and by improving the electricity rate structure; (ii) social inclusion and equality, by providing more inclusive infrastructure, which will help increase the number of households with access to drinking water and sewers; the aim of this operation in particular will be to narrow the gap in access to drinking water in urban and rural areas; and (iii) economic integration, under the national subsidiarity criterion, by promoting suitable technical and infrastructure conditions that facilitate the increase of regional electricity exchanges through the SIEPAC line. The program is aligned with the following crosscutting themes: (i) gender equality and diversity, by developing a plan within IDAAN to improve support for users with disabilities and incorporating the gender-based approach into the Rural Aqueduct Strategy and into project design and execution; (ii) climate change and environmental sustainability, by fulfilling the energy efficiency and renewable energy commitments and by contributing to the country's water security through improvements to information systems, rational water use, and better coordination in managing disaster and climate change risks; (iii) institutional capacity and rule of law, by strengthening the sector's planning capacity through the PEN, ATE, and

⁵⁵ [OECD, Principles on Water Governance](#). Directorate for Public Governance and Territorial Development, 2015.

- Transmission Expansion Plan. The program will also strengthen planning and governance focused on the preservation and effective management of water as a natural resource. Approximately 37.5% of operation resources are associated with policies that will promote climate change mitigation activities,⁵⁶ according to the [joint MDB methodology for tracking climate finance](#). These resources contribute to the IDB Group's goal of increasing the financing of climate-change-related projects to 30% of all approvals by the end of 2020.
- 1.38 The program is consistent with the Energy Sector Framework Document (document GN-2830-8) in the thematic areas of energy access, sustainability, security, and governance, by fostering policy reforms that promote: (i) the sector's sustainable development; (ii) energy matrix diversification; (iii) efficient energy use; and (iv) regional integration. The program is consistent with the Climate Change Sector Framework Document (document GN-2835-8), since the proposed energy policy reforms entail support for measures to implement renewable energy and energy efficiency. The program is consistent with the Water and Sanitation Sector Framework Document (document GN-2781-8), aligning with all the success factors in promoting universal access to W&S, strengthening sector governance and management, and incorporating climate change, water security, and risk management considerations. The program is aligned with the IDB Infrastructure Strategy: Sustainable Infrastructure for Competitiveness and Inclusive Growth (document GN-2710-5), particularly in the priority area of promoting ongoing improvement in infrastructure governance to increase service delivery efficiency.
- 1.39 **Consistency with the Public Utilities Policy (document GN-2716-6).** The program is consistent with the principles of the Public Utilities Policy (PUP) by supporting policy reforms in both sectors driven by compliance with such principles. In that respect, the program promotes the conditions of financial sustainability and economic evaluation and contributes to the technical, operational, and financial sustainability of the energy sector, by promoting planning and competition in the domestic and regional markets and improving rate structures and processes as well as subsidy rationalization. With respect to the W&S sector, the reforms set out by the program and the national sector objectives are aligned with the PUP objectives and principles, insofar as transparency and accountability are promoted, by improving the sector's monitoring and evaluation mechanisms with the PNSH, supporting the development of sector planning and the separation of roles in activities to be performed by CONAGUA, and promoting improvements in IDAAN's financial autonomy. For the economic evaluation, a cost-benefit estimate was performed of the proposed program reforms ([optional link 2](#) and [optional link 3](#)).
- 1.40 **Gender gaps and actions.** The gap analysis shows that there is still an unequal share of women in executive positions on JAARs (paragraph 1.17). This programmatic policy-based loan (PBP) includes a policy measure for the development of a strategy to strengthen rural aqueduct governance with a gender perspective through guidelines that outline normative, social, and environmental aspects and that guide sector actors towards effective project programming and

⁵⁶ Includes climate finance, policy conditions that support the promotion of energy efficiency, the development of renewable energy, and the promotion of low-emission transportation.

execution. Moreover, in the energy sector, the Universal Access Program specifically provides for training and the promotion of productive energy uses with a gender-based component.

- 1.41 **Disability gaps and actions.** According to improvement plan data for this population group, there is a lack of adequate systems to support customers with disabilities, no suitable commercial agencies to provide universal access, and lack of accessible communication for visually or hearing-impaired customers. IDAAN has an Opportunity Equalization Office, which determines strategies, programs, and projects related to the inclusion of people with disabilities and which will be strengthened as a result of improvements in support for users with disabilities through an inclusion and customer service policy.⁵⁷
- 1.42 **Innovation.** As part of the contract for a specialized operator to strengthen IDAAN, the use of innovative and digitalization technologies is planned, to make processes more efficient, reduce losses, optimize consumption, and improve commercial management, etc. In energy, approval of a national strategy for electric mobility is planned, as is the use of solar distributed generation to reduce subsidies. Similarly, the ATE envisages actions for innovation in the sector.
- 1.43 **Local productive development.** The measures implemented to support energy security have a direct impact on productive development and the productivity of businesses and industries by guaranteeing energy supply. The proposed measures will support the creation of new local markets for the sale, installation, and/or maintenance of home photovoltaic systems, electric vehicles, and efficient air conditioners.

B. Objectives, components, and cost

- 1.44 **Program objective.** The program's general objective is to contribute to the sustainability of the energy sector and to increased coverage and improved management of water supply and sanitation services through a series of policy reforms aimed at strengthening and supplementing the regulatory and institutional framework of the energy and water and sanitation sectors. The specific objectives are to: (i) improve energy security through energy matrix diversification, energy efficiency, and regional integration; (ii) improve the financial and social sustainability of the energy sector and ease the fiscal burden by reducing the cost of subsidies in the sector and targeting them more effectively; (iii) strengthen institutions in the areas of energy planning and purchasing; and (iv) improve interagency coordination in the water and sanitation sector with defined strategic planning and clear assignment of roles of all sector agencies.
- 1.45 The second operation in the programmatic series has the same objectives and original components as those agreed upon at the start of this series and includes adjustments in the definition of the matrix commitments, reinforcing the accuracy of their scope without altering the originally defined structure. The Policy Matrix (Annex II), Means of Verification Matrix ([required link 2](#)), and Comparative Matrix ([optional link 1](#)) present the proposed policy actions and the means of verifying their fulfillment for the relevant disbursement of resources. Below is a description

⁵⁷ Sandoval, Diana. Plan to Improve Support for Users with Disabilities in IDAAN. 2020.

of the three components and the subcomponents around which the operation was structured.

- 1.46 **Component 1. Macroeconomic stability.** The objective is to ensure the maintenance of a stable macroeconomic context consistent with the objectives of the program as set out in the Policy Matrix and in the Sector [Policy Letter](#).
- 1.47 **Component 2. Sustainable development of the energy sector.** This component supports the implementation of reforms that promote increased electric power supply with renewable energy, energy efficiency, and natural gas, and the consolidation of institutional planning, management, coordination, and regulation capacities through the following subcomponents.
- 1.48 **Subcomponent 2.1. Development of a sustainable energy matrix.** This subcomponent seeks to increase and diversify the electricity supply by fostering sector planning, the development of renewable energy, the implementation of energy efficiency, and an increase in regional electric power exchanges. The policy conditions are: (i) the Guidelines of the Energy Transition Agenda of Panama submitted to Cabinet Council for approval; (ii) approval of the National Electric Mobility Strategy (ENME), which promotes low-emission transportation and contributes to the fulfillment of Panama's climate commitments under the Paris Agreement; (iii) the Sustainable Construction Regulations approved⁵⁸ by the Ministry of Public Works/Technical Engineering and Architecture Board; (iv) study on financial and institutional system alternatives for financing the SNT reinforcements through the fourth transmission line converging with SIEPAC to improve regional electric energy exchanges, developed by ETESA; and (v) ASEP approval of the 2019 Electricity Transmission Expansion Plan aligned with the Regional Indicative Expansion Plan of the Regional Electricity Market.
- 1.49 Under this subcomponent, the conditions referring to natural gas were replaced with the condition referring to the Energy Transition Agenda (paragraph 1.48(i)). The replaced conditions are: (i) progress made on presenting the draft natural gas law to the National Assembly; (ii) draft regulations for the development of the activities of transport, network distribution, and virtual distribution of natural gas, pursuant to the draft natural gas law prepared by ASEP; and (iii) long-term natural gas development master plan approved by the Cabinet Council. The replacement of the conditions referring to natural gas is due to the fact that the Energy Transition Agenda is an update to the energy sector plan with a broader and more coordinated vision for all subsectors and takes new technological advances into account (paragraph 1.26). The government has incorporated natural gas into the Energy Transition Agenda, regarding it as a *fuel* that can *facilitate the transition to a low-carbon matrix*. Additionally, condition (i) a study of alternatives for capitalization and financing of the UREE Fund, designed and approved by the SNE, and condition (ii) budget to adopt energy efficiency measures and implement energy audits, assigned in at least one public institution, were replaced by other conditions also geared toward energy efficiency in building and transportation (paragraph 1.48, points (ii) and (iii)); this replacement was due to the prioritization of measures to promote energy efficiency. Lastly, the wording of condition (iv)

⁵⁸ Mandatory regulations for all new buildings (public and private sectors).

referring to the fourth transmission line was adjusted to reflect the fact that ETESA has conducted a study with various financing alternatives.

- 1.50 **Subcomponent 2.2. Improvement and consolidation of the sector's institutional capacity.** The goal is to strengthen the institutional framework in areas of management, coordination, and planning. The second operation maintains the following conditions: (i) publication of the updated 2015-2050 National Energy Plan (PEN); and (ii) wholesale electricity energy market purchasing rules containing models for long-term electric energy contracting specifications that take into account multiple sources and generation technologies, approved by ASEP. These two conditions support the consideration of cost efficiency criteria and the inclusion of diverse energy sources in the electricity sector expansion. Progress in implementing the 2015-2050 National Energy Plan, and its 2017 update, are contained in the Guidelines of the Energy Transition Agenda published in 2020.
- 1.51 **Subcomponent 2.3. Rationalization of subsidies in the energy sector.** This subcomponent will foster the development and implementation of mechanisms to reduce subsidies for electric power consumption and improve their targeting for the most vulnerable communities. The conditions are: (i) progress made in analyzing the replacement of the subsidy for consumption of electricity from non-utility-generation with photovoltaic systems; (ii) progress made in analyzing the subsidies and Business Development Plan – Solar Water Heaters; and (iii) a new rate structure that reflects cost-efficient delivery criteria, approved by ASEP.
- 1.52 Under this subcomponent, the condition, “study for the targeting of subsidies for electricity rates and liquefied petroleum gas prices that exclusively benefit the low-income population, approved the SNE,” was replaced with two conditions (paragraph 1.51, points (i) and (ii)). No progress could be made with the targeting study due to difficulties setting subsidy targets in light of the situation caused by the pandemic (paragraphs 1.4 and 1.11). The two studies proposed for this second phase look at targeting subsidies to poor populations cost effectively using new technologies. These studies also support the acceleration of the energy transition by evaluating the phasing out of consumer subsidies, considering that these subsidies can be redirected to finance the installation of solar panels and the purchase of efficient equipment in qualifying consumer dwellings.
- 1.53 The changes in policy conditions made to this component do not affect the objectives of the programmatic series but, rather, strengthen them.
- 1.54 **Component 3. Sustainable development of the water and sanitation sector.** This component will support sector reforms aimed at complementing actions in the sector to strengthen the capacity of sector entities to fulfill their functions and review the sector's institutional framework.
- 1.55 **Subcomponent 3.1. Improvement and consolidation of the sector's institutional capacity.** The objective of this subcomponent is to strengthen interagency coordination, strategic planning, and public policy tools to promote better performance of the W&S management model and to continue allocating the resources necessary to ensure universal coverage of W&S nationwide by 2030. The following policy commitments are therefore supported: (i) PNSH in execution with budget resources allocated by the MEF; (ii) CONAGUA Technical Secretariat

- operating under the Ministry of the Presidency with a technical/administrative structure and budget allocation for its operations; (iii) progress made in institutionalizing the delivery of sanitation services by strengthening the Panama Sanitation Program (PSP) coordination unit at MINSA for the expansion, operation, and maintenance of sanitation systems, making the PSP more efficient; and (iv) top priorities for meeting objectives in the water sector approved by CONAGUA, and an action plan approved to improve water sector governance in Panama.
- 1.56 Under this subcomponent, the first two policy conditions were changed to reinforce progress in PNSH implementation and to reflect the shift in CONAGUA's functional dependence from MiAmbiente to the Ministry of the Presidency to assume a more strategic role within the governmental structure. Given that the National Assembly did not approve the creation of the Empresa Pública de Saneamiento de Panamá [Public Sanitation Company of Panama], efforts continued to strengthen the PSP⁵⁹ ⁶⁰ and improve its operational efficiency. A new policy condition was added, allowing CONAGUA to approve guidelines to make progress on establishing the structure for the comprehensive sector governance as part of the performance of its role to promote and guarantee PNSH development and implementation.
- 1.57 **Subcomponent 3.2. Strengthening of water and sanitation service delivery management.** The objective of this subcomponent is to promote water and sanitation service delivery management. The following policy commitments are supported: (i) contracting process launched by IDAAN for a water and sewer service operator that will provide technical assistance in technical, business, administrative, and planning areas, in order to contribute to improving water service quality for the population of the Panama City Metropolitan Area; (ii) strategy approved by IDAAN for financial sustainability in the medium and long term, taking the form of a financial strengthening plan emphasizing: (a) greater operating cost efficiency; (b) higher revenue from nonrate activities; (c) transparency in both subsidy targeting and frequency of transfers received from the government; and (d) higher revenue from rate adjustments; (iii) plan approved by IDAAN to improve service for users with disabilities as part of IDAAN's inclusion policies; (iv) technical standards approved for the design and construction of rural aqueducts, to establish the applicable minimum engineering requirements for ensuring their capacity, stability, vulnerability, and structural safety, according to the specific conditions of the project site; and (v) approval of a rural aqueduct governance strategy with a gender perspective.
- 1.58 Five new policy conditions were added under this new subcomponent to improve IDAAN's operational management and financial sustainability, as well as its inclusion policies by introducing the gender perspective in the design of rural

⁵⁹ Support for strengthening the PSP is being provided under loan 3506/OC-PN through support for the implementation of an Integrated Management System and strengthening in the areas of operation and maintenance, project management, and technical equipment.

⁶⁰ The government is also strengthening the PSP under Executive Decree 592 of 23 September 2020, through responsibility for operation and maintenance, sewer systems and sanitation works, institutional management of agreements between MINSA and IDAAN, and resource management to meet PSP objectives, the capacity to define the organizational structure, and staff selection.

projects in the sector and supplementing the technical regulations for their construction.

- 1.59 **Subcomponent 3.3. Promotion of water security in the country.** The objective of this subcomponent is to contribute to the country's water security through the following policy commitments: (i) Interagency Coordinating Committee created to structure the National Water Resource Information System; (ii) progress made by CONAGUA in conducting studies on multipurpose projects to increase water availability; (iii) agreement reached to coordinate work on the implementation of a National Water Culture Program in Panama, which will formulate, promote, and strengthen a culture of proper water use, conservation, and management throughout the country with the organized, collaborative involvement of different institutions in the water sector; and (iv) agreement reached to coordinate work on the implementation of a governance strategy for managing risks related to extreme hydrometeorological events with the objective of identifying a methodological framework for the development and execution of a five-year work plan for the comprehensive management of disaster risks associated with hydrometeorological events with the organized, collaborative involvement of different government institutions in the water sector.
- 1.60 Four new policy conditions were added under this new subcomponent, reflecting the commitment to improve the country's water security by improving institutional coordination among the different actors involved and the development of specific programs.
- 1.61 **Program beneficiaries.** The program will benefit all of the country's inhabitants through the development of a more sustainable, diversified, and cleaner energy matrix resilient to climate change. In the W&S sector, the entire population will benefit, since, by 2030, 100% of households are expected to have 24/7 access to clean drinking water, and 100% of urban households are expected to have access to sanitary sewers.

C. Key results indicators

- 1.62 To measure the expected impact of the reform measures in the medium term, a Results Matrix was developed jointly with the borrower, indicating the program's expected impacts, outcomes, and outputs. Table 1 provides a summary of the impacts. To achieve these outcomes, the assumption is that the various actors in the two sectors will invest the resources identified in the different instruments and will implement the approved policy measures.

Table 1. Expected impacts and indicators

Impact	Indicator
Reduction of greenhouse gas emissions by unit of energy in the electricity sector	Greenhouse gas emissions factor of the electricity sector
Improved energy efficiency	Energy consumption intensity (koe/GDP)
Increased drinking water coverage	Households with access to drinking water services managed safely in urban areas
Increased sanitary sewer and treatment coverage	Households with connection to sanitary sewer and treatment service in urban areas

- 1.63 **Economic evaluation.** Based on the recommendations of the Office of Evaluation and Oversight (OVE) in its 2011 Evaluability Review of Bank Projects⁶¹ and the findings of the review of evaluation practices and standards for policy-based loans (PBLs) conducted by the Evaluation Cooperation Group (consisting of the independent evaluation offices of the multilateral development banks),⁶² as provided in paragraph 1.3 of the Review of the Development Effectiveness Matrix for Sovereign Guaranteed and Non-Sovereign Guaranteed Operations (document GN-2489-5), which states, inter alia, that no analysis of efficiency in the use of financial resources is needed,⁶³ it was determined that no economic analysis would be performed for this type of loan, as reported to the Bank's Board of Executive Directors. As such, the economic analysis is not considered in measuring the Development Effectiveness Matrix (DEM) evaluability score for this program.

II. FINANCING STRUCTURE AND MAIN RISKS

A. Financing instruments

- 2.1 **Financial instrument.** This operation, which is the second in a series of two consecutive and independent but technically linked operations, has been designed as a programmatic policy-based loan (PBP) based on the guidelines and directives established in the New Lending Framework (document GN-2200-13) and in document CS-3633-2, Policy-based Loans: Guidelines for Preparation and Implementation. The programmatic modality is justified by: (i) the complex and progressive nature of the reforms; (ii) the various timelines for implementation of the reforms; (iii) coordination between the institutions involved; (iv) support for policy dialogue in the country; and (v) the monitoring required for implementation of the reforms, as well as monitoring and feedback on results. This PBP made it possible to design (in its first tranche) and consolidate (in this second tranche) the policy guidelines and the institutional and regulatory changes required to achieve the operation's objective. This PBP incorporates the main challenges of the energy and W&S sectors.
- 2.2 **Dimensioning of the operation.** As established in paragraph 3.27, point (b), of document CS-3633-2, Policy-based Loans: Guidelines for Preparation and Implementation. Update, the dimensioning of the operation was based on country's broad fiscal resource needs. The current operation amount will be US\$200 million, financed from regular Ordinary Capital resources. This program represents 3.6% of the country's net financing requirements in 2020.

⁶¹ Document RE-397-1: "Currently, Economic Analysis section is computed as the maximum between the CBA (cost-benefit analysis) and the CEA (cost-effectiveness analysis). Yet neither a CBA nor a CEA is applicable to PBLs (policy-based loans) and PBPs (programmatic policy-based loans)."

⁶² Good Practice Standards for the Evaluation of Public Sector Operations. Evaluation Cooperation Group, Working Group on Public Sector Evaluation, 2012 Revised Edition. February 2012.

⁶³ The Evaluation Cooperation Group calls for policy-based loans to be evaluated for relevance, effectiveness, and sustainability. Efficiency was not included as a criterion because policy-based loans are sized according to the country's financing gap, independent of project benefits.

B. Environmental and social safeguard risks

- 2.3 Pursuant to Directive B.13 of the Environment and Safeguards Compliance Policy (Operational Policy OP-703), no environmental impact classification is required. The program supports the definition of policies, standards, management instruments, and other institutional strengthening actions, so no direct significant impacts are expected on the environment and natural resources.

C. Other key risks and issues

- 2.4 The following medium risks were identified: (i) Macroeconomic risk of fiscal sustainability related to the length of Panama's COVID-19 lockdown, leading to an expectation that GDP will decline significantly in 2020. This, combined with the uncertainty regarding the course of the pandemic, raises a risk that economic recovery will take longer than expected, impacting public revenues and, therefore, the deficit and debt. This risk is mitigated through the fiscal consolidation being pursued by the Government of Panama, including the strengthening of the Directorate General of Revenue with IDB support, and through dialogue with authorities on fiscal sustainability, laying the groundwork for dealing with the impact, if the risk materializes; (ii) Development risk related to the lack of coordination between the institutions involved in fulfilling the program commitments. This risk is mitigated through the development of a monitoring and supervision plan that includes a timetable and milestones, as well as coordination meetings with the respective sector entities (Ministry of Economy and Finance (MEF), National Water Council (CONAGUA), and National Energy Department (SNE)); and (iii) Development risk related to the many different actors involved in the program, which makes tracking and the collection of information on results difficult. This risk is mitigated through interagency coordination and supervision by the MEF, CONAGUA, and the SNE for the implementation of reforms and collection of information on results.
- 2.5 **Sustainability of the reforms.** The sustainability of the policy actions developed in the programmatic series is based on: (i) the Government of Panama's commitment to the reforms; (ii) the request of the MEF and apex agencies the energy and W&S sectors to consolidate the programmatic series, making it possible to continue and deepen the reforms initiated in 2017; and (iii) the policy instruments developed, with approvals at the required levels and valid for a medium- and long-term horizon. The Bank will also continue to support both sectors with technical cooperation funding, loans in execution, and other future needs for support requested by the country.

III. IMPLEMENTATION AND MANAGEMENT PLAN

A. Summary of implementation arrangements

- 3.1 The borrower will be the Republic of Panama. The borrower, acting through the Ministry of Economy and Finance (MEF), will be responsible for program execution and utilization of the loan proceeds, serving as executing agency through the Public Finance Directorate. The MEF, via periodic analysis and monitoring meetings, will coordinate with the National Energy Department (SNE), the National Public Utilities Authority (ASEP), the state electricity transmission company Empresa Estatal de Transmisión Eléctrica (ETESA), the Ministry of the

Environment (MiAmbiente) through the Technical Secretariat of the National Water Council (CONAGUA), the Ministry of Health (MINSA) through the Water Supply and Sanitary Sewerage Subsector Division (DISAPAS), and the Ministry of the Presidency to fulfill the policy commitments and the consolidation of the sector reform. The MEF is responsible for: (i) ensuring that policy objectives are met; (ii) providing evidence that the agreed policy conditions have been fulfilled; and (iii) compiling and providing the information to allow the Government of Panama and the Bank to measure and evaluate the program's results.

- 3.2 The loan proceeds will be transferred to the MEF, following the financial administration procedures specified in national legislation.
- 3.3 **Special contractual conditions precedent to the sole disbursement of the loan proceeds: The first and only disbursement of the resources for the second operation of the series will be subject to fulfillment of the policy reform conditions established in the Policy Matrix (Annex II), the [Policy Letter](#), in addition to fulfillment of the other conditions established in the Loan Contract.**

B. Summary of arrangements for monitoring results

- 3.4 The monitoring and evaluation plan developed for operation 4234/OC-PN was updated and includes the medium- and long-term impact and outcome indicators, consistent with the agreed policy reform process in the Policy Matrix ([Annex III](#)). These indicators are reflected in the Results Matrix. The monitoring and evaluation plan provided for monitoring and coordination meetings between the government agencies involved to determine developments and results in reform progress.
- 3.5 The project completion report will be prepared, once this second operation has been approved, and will assess the impact and the degree to which the objectives set by the two operations comprising the program have been met, within six months after the date of the last disbursement.

IV. POLICY LETTER

- 4.1 The Government of Panama has delivered the [Policy Letter](#) ([required link 1](#)) to the Bank, describing the proposed objectives and actions, and reaffirming its commitment to the reforms and activities agreed upon with the Bank. The Policy Matrix, Results Matrix, and Means of Verification Matrix were also agreed upon with the government ([required link 2](#)).

Development Effectiveness Matrix		
Summary		PN-L1159
I. Corporate and Country Priorities		
Section 1. IDB Group Strategic Priorities and CRF Indicators		
Development Challenges & Cross-cutting Issues	<div>-Social Inclusion and Equality</div> <div>-Productivity and Innovation</div> <div>-Economic Integration</div> <div>-Gender Equality and Diversity</div> <div>-Climate Change</div> <div>-Institutional Capacity and the Rule of Law</div>	
CRF Level 2 Indicators: IDB Group Contributions to Development Results	<div>-Households with improved access to water and sanitation (#)</div> <div>-Emissions avoided (annual tons CO2 equivalent)</div>	
2. Country Development Objectives		
Country Strategy Results Matrix	GN-2838	“Deepen the logistics services, efficiency, and connectivity of the productive infrastructure” and “Improve the delivery of basic services to the population living in poverty”
Country Program Results Matrix	GN-2991-1	The intervention is included in the 2020 Operational Program.
Relevance of this project to country development challenges (If not aligned to country strategy or country program)		
II. Development Outcomes - Evaluability		
3. Evidence-based Assessment & Solution		Evaluable
3.1 Program Diagnosis		7.9
3.2 Proposed Interventions or Solutions		2.5
3.3 Results Matrix Quality		1.6
3.3 Results Matrix Quality		3.8
4. Ex ante Economic Analysis		N/A
5. Monitoring and Evaluation		9.5
5.1 Monitoring Mechanisms		4.0
5.2 Evaluation Plan		5.5
III. Risks & Mitigation Monitoring Matrix		
Overall risks rate = magnitude of risks*likelihood		Medium Low
Environmental & social risk classification		B.13
IV. IDB's Role - Additionality		
The project relies on the use of country systems		
Fiduciary (VPC/FMP Criteria)		
Non-Fiduciary		
The IDB's involvement promotes additional improvements of the intended beneficiaries and/or public sector entity in the following dimensions:		
Additional (to project preparation) technical assistance was provided to the public sector entity prior to approval to increase the likelihood of success of the project		

Evaluability Note: This operation is the second of two operations technically linked to each other and financed independently under the modality of Programmatic Loan to Support Policy Reforms (PBP). The general objective of the series is to contribute to the sustainability of the energy sector, and to the increase of coverage and improvement in the management of Potable Water and Sanitation services, through a series of policy reforms aimed at strengthening and complementing the normative and institutional framework of the energy and water and sanitation (WSA) sectors. The specific objectives of the series are: (i) improve energy security through diversification of the energy matrix, Energy Efficiency (EE) and regional integration; (ii) improve the financial and social sustainability of the energy sector and the fiscal burden, by reducing the cost of sector subsidies and improving their targeting; (iii) strengthen the institutional framework for planning and purchasing energy; and (iv) improve interinstitutional coordination in the WSA sector, with defined strategic planning and a clear assignment of roles for all entities in the sector.

The documentation presents a summary of the progress of the first phase of the program. An adequate diagnosis of the problems and their determinants is presented in the context of this second phase, which is consistent with the proposed interventions and the objectives of the series. The results matrix (RM) has a clear vertical logic and is consistent with the RM of the first phase. The RM includes SMART indicators at the level of output, results, and impacts, with their respective means of collecting information. The RM indicates that the targets for impact and result indicators for Energy are subject to confirmation with the National Secretary of Energy (SNE).

The monitoring and evaluation plan identifies the instruments that will be used for monitoring and it proposes a reflexive evaluation (Before-After).

The risks identified in the risk matrix seem reasonable and are classified as Medium-High (3) and Low (1) risk. Risk management strategies, activities, responsible parties, and triggers are included for the Medium-High risks.

POLICY MATRIX

Objective:	The program's general objective is to contribute to the sustainability of the energy sector and to increased coverage and improved management of water supply and sanitation services through a series of policy reforms aimed at strengthening and supplementing the regulatory and institutional framework of the energy and water and sanitation sectors.				
Policy objective/ components	Policy conditions Programmatic loan I		Policy conditions Programmatic loan II		Fulfillment status ¹
Component 1. Macroeconomic stability					
Stability in the general macroeconomic policy framework	1.1	Stable macroeconomic framework consistent with program objectives as set out in the Policy Matrix and in the Sector Policy Letter.	1.1.1	Stable macroeconomic framework consistent with program objectives as set out in the Policy Matrix and in the Sector Policy Letter.	Fulfilled
Component 2: Sustainable development of the energy sector					
Subcomponent 2.1. Development of a sustainable energy matrix					
Improve energy security through energy matrix diversification, energy efficiency, and regional integration	2.1.1	Proposed draft natural gas law, which establishes the regulatory framework for the importation, regasification, storage, export, pipeline transport, network distribution, and virtual transportation and distribution of natural gas, presented by the National Energy Department (SNE) to the Cabinet Council.	2.1.1.1	Guidelines of the Energy Transition Agenda of Panama submitted to Cabinet Council for approval.	Fulfilled (Q4 2020)
	2.1.2	Proposal for a National Plan of Action for institutional strengthening in energy efficiency, prepared by the SNE, laying down institutional, legal, regulatory, and financing guidelines for reducing energy consumption in different sectors of the country.	2.1.2.1	Approval of the National Electric Mobility Strategy (ENME), which promotes low emission transportation and contributes to the fulfillment of Panama's climate commitments under the Paris Agreement.	Fulfilled (Q4 2019)

¹ This information was merely indicative as of the date of this document. In accordance with document Policy-based Loans: Guidelines for Preparation and Implementation (document CS-3633-2), compliance with all the specified conditions for disbursement, including the maintenance of an appropriate macroeconomic policy framework, will be verified by the Bank at the time of the borrower's request for the corresponding disbursement, as aptly reflected in the disbursement eligibility memorandum.

Policy objective/ components	Policy conditions Programmatic loan I		Policy conditions Programmatic loan II	Fulfillment status ¹
	2.1.3	Technical regulations for energy efficiency in the use of air conditioners, approved by the Ministry of Trade and Industries, and sustainable construction guidelines for energy savings in buildings, approved by the SNE.	2.1.3.1 Sustainable Construction Regulations approved by the Ministry of Public Works/Technical Engineering and Architecture Board.	Fulfilled (Q3 2019)
	2.1.4	Reinforcement of the National Transmission System (SNT) in the Veladero-Llano Sanchez section converging with the Central American Electrical Interconnection System (SIEPAC) to improve regional exchanges, completed by the Empresa Estatal de Transmisión Eléctrica (ETESA).	2.1.4.1 Study on financial and institutional system alternatives for financing the SNT reinforcements through the fourth transmission line converging with SIEPAC to improve regional electric energy exchanges, developed by ETESA.	Fulfilled (Q2 2020)
			2.1.4.2 ASEP approval of the 2019 Electricity Transmission Expansion Plan aligned with the Regional Indicative Expansion Plan of the Regional Electricity Market.	Fulfilled (Q2 2020)
Subcomponent 2.2. Improvement and consolidation of the sector's institutional capacity				
Strengthen the institutional framework in areas of energy planning and procurement	2.2.1	2015-2050 National Energy Plan (PEN), defining the country's energy policy road map and governed by four guiding principles: (i) universal access and poverty reduction; (ii) decarbonization of the matrix; (iii) efficient energy use and moderation of consumption; and (iv) security of supply, approved by the Cabinet Council.	2.2.1.1 Publication of the updated 2015 2050 National Energy Plan (PEN).	Fulfilled(Q1 2018)
	2.2.2	Definition of the scope of a proposal to modify the models for long-term electric energy procurement specifications to take into account multiple sources and generation technologies, approved by the SNE.	2.2.2.1 Wholesale electricity energy market purchasing rules containing models for long-term electric energy contracting specifications that take into account multiple sources and generation technologies, approved by ASEP.	Fulfilled (Q2 2019)

Policy objective/ components	Policy conditions Programmatic loan I	Policy conditions Programmatic loan II	Fulfillment status ¹
Subcomponent 2.3. Rationalization of subsidies in the energy sector			
Improve the financial and social sustainability of the energy sector as well as the tax burden by reducing the cost of subsidies in the sector and improving their targeting	2.3.1 Targeting of subsidies in the energy sector by reducing the Western Rate Fund (FTO) subsidy and eliminating the Energy Compensation Fund, approved by the Cabinet of Ministers.	2.3.1.1 Progress made in analyzing the replacement of the subsidy for consumption of electricity from non-utility-generation with photovoltaic systems.	Pending (Q4 2020)
		2.3.1.2 Progress made in analyzing the subsidies and Business Development Plan – Solar Water Heaters.	Fulfilled (Q4 2020)
	2.3.2 Study commissioned by ASEP for the revision and definition of a new rate structure to introduce electricity rates based on efficient costs contracted by ASEP.	2.3.2.1 A new rate structure that reflects cost efficient delivery criteria, approved by ASEP.	Fulfilled (Q1 2019)
Component 3. Sustainable development of the water and sanitation sector			
Subcomponent 3.1. Improvement and consolidation of the sector's institutional capacity			
Improve interagency coordination in the W&S sector, with defined strategic planning and clear assignment of roles in all sector agencies	3.1.1 2015-2050 National Hydrological Security Plan (PNSH) "Water for All," which is the road map that establishes the policies, thematic pillars, and a plan of action to ensure that water is available in a quantity and quality acceptable to all users, particularly for human consumption, approved by the Cabinet Council.	3.1.1.1 PNSH in execution with budget resources allocated by the MEF.	Fulfilled (Q1 2020)
	3.1.2 National Water Council (CONAGUA) created by the Cabinet Council, chaired by MiAmbiente, and comprising the MEF, MINSA, the Ministry of Agricultural Development, the Panama Canal Authority, ASEP, IDAAN, and the Ministry of the Presidency, to promote, guide, coordinate, and ensure implementation of the 2015-2050 National Hydrological Security Plan "Water for All," and the CONAGUA Technical Secretariat created by the Cabinet Council.	3.1.2.1 CONAGUA Technical Secretariat operating under the Ministry of the Presidency with a technical/administrative structure and budget allocation for its operations.	Fulfilled (Q3 2020)

Policy objective/ components	Policy conditions Programmatic loan I	Policy conditions Programmatic loan II	Fulfillment status ¹
	3.1.3 Draft law for the creation of the Empresa Pública de Saneamiento de Panamá, setting out its objectives, powers, and privileges, corporate governance, labor regime and salary structure, capital, and pricing and subsidy structure, prepared by MINSA and presented to the Cabinet Council.	3.1.3.1 Progress made in institutionalizing the delivery of sanitation services by strengthening the PSP coordination unit at MINSA for the expansion, operation, and maintenance of sanitation systems, making the PSP more efficient.	Fulfilled (Q4 2020)
	N.A.	3.1.3.2 Top priorities for meeting objectives in the water sector approved by CONAGUA, and an action plan approved to improve water sector governance in Panama.	Fulfilled (Q1 2020)
Subcomponent 3.2. Strengthening of water and sanitation service delivery management			
Promote efficient water and sanitation service delivery management	N.A.	3.2.1 Contracting process launched by IDAAN for a water and sewer service operator that will provide technical assistance in technical, business, administrative, and planning areas, in order to contribute to improving water service quality for the population of the Panama City Metropolitan Area.	Fulfilled (Q1 2020)
	N.A.	3.2.2 Strategy approved by IDAAN for financial sustainability in the medium and long term, taking the form of a financial strengthening plan emphasizing: (a) greater operating cost efficiency; (b) higher revenue from nonrate activities; (c) transparency in both subsidy targeting and frequency of transfers received from the government; and (d) higher revenue from rate adjustments.	Fulfilled (Q4 2020)
	N.A.	3.2.3 Plan approved by IDAAN to improve service for users with disabilities as part of IDAAN's inclusion policies.	Fulfilled (Q4 2020)
	N.A.	3.2.4 Technical standards approved for the design and construction of rural aqueducts, to establish the applicable minimum engineering requirements for ensuring their capacity, stability, vulnerability, and structural safety, according to the specific conditions of the project site.	Fulfilled (Q2 2020)

Policy objective/ components	Policy conditions Programmatic loan I	Policy conditions Programmatic loan II	Fulfillment status ¹
	N.A.	3.2.5 Approval of a rural aqueduct governance strategy with a gender perspective.	Fulfilled (Q4 2020)
Subcomponent 3.3. Promotion of water security in the country			
Contribute to the country's water security	N.A.	3.3.1 Interagency Coordinating Committee created to structure the National Water Resource Information System.	Fulfilled (Q2 2019)
	N.A.	3.3.2 Progress made by CONAGUA in conducting studies on multipurpose projects to increase water availability.	Fulfilled (Q3 2020)
	N.A.	3.3.3 Agreement reached to coordinate work on the implementation of a National Water Culture Program in Panama, which will formulate, promote, and strengthen a culture of proper water use, conservation, and management throughout the country with the organized, collaborative involvement of different institutions in the water sector.	Fulfilled (Q4 2020)
	N.A.	3.3.4 Agreement reached to coordinate work on the implementation of a governance strategy for managing risks related to extreme hydrometeorological events with the objective of identifying a methodological framework for the development and execution of a five year work plan for the comprehensive management of disaster risks associated with hydrometeorological events with the organized, collaborative involvement of different government institutions in the water sector.	Fulfilled (Q4 2020)

RESULTS MATRIX

Program objective:	The program's general objective is to contribute to the sustainability of the energy sector and to increased coverage and improved management of water supply and sanitation services through a series of policy reforms aimed at strengthening and supplementing the regulatory and institutional framework of the energy and water and sanitation sectors.
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GENERAL DEVELOPMENT OBJECTIVE

Indicators	Unit of measure	Baseline value	Baseline year	Expected year to be achieved	Target ¹	Means of verification	Comments
General development objective: Contribute to the sustainability of the energy sector and to increased coverage and improved management of water supply and sanitation services through a series of policy reforms aimed at strengthening and supplementing the regulatory and institutional framework of the energy and water and sanitation sectors.							
Energy consumption intensity	koe/GDP US\$ million	0.399	2019	2021	0.399	ASEP statistics and official GDP information for Panama from the MEF.	GDP in real terms 2007.
Greenhouse gas emissions factor of the electricity sector	TCO ₂ /MWh	0.279	2019	2024	0.239	Emissions factor monitoring report for the electricity sector – SNE.	Metric tons of CO ₂ equivalent by electricity generation unit in the matrix.
Households with access to drinking water services managed safely in urban areas (urban coverage)	Households (%)	774,720 (98.8%)	2018	2021	828,422 (99%)	Voluntary National Review of the Sustainable Development Goals (2020).	
Households with access to drinking water services managed safely in rural areas (rural coverage)	Households (%)	285,488 (84.0%)	2018	2021	302,471 (90%)	Voluntary National Review of the Sustainable Development Goals (2020).	
Households with connection to sanitary sewer and treatment service in urban areas (urban coverage)	Households (%)	407,886 (53.2%)	2017	2021	530,438 (63%)	Joint Monitoring Programme.	

¹ The targets for the energy impact indicators are subject to confirmation by the National Energy Department (SNE).

SPECIFIC DEVELOPMENT OBJECTIVES

Indicators	Unit of measure	Baseline value	Baseline year	End of project (2021) ²	Means of verification	Comments
Specific development objective 1: Improve energy security through energy matrix diversification, energy efficiency, and regional integration.						
Installed renewable energy capacity in the National Interconnected System (SIN).	MW	455	2019	671	ASEP statistics.	Biogas, wind, and solar.
Portion of generation from nonhydroelectric renewable sources.	%	8.9	2019	10.33%	ASEP statistics.	Biogas, wind, and solar generation over total – 2019 PESIN target.
Installed natural gas generation capacity in the SIN.	MW	381	2019	381	ASEP statistics.	
Electrical energy commercialized between Panama and SIEPAC.	GWh	482	2019	688	Reports from the Regional Operating Entity.	Sum of exports and imports between Panama and SIEPAC.
Importation of air conditioners with labels that meet the minimum energy efficiency requirements.	Number of efficient air conditioners imported	96,295	2019	150,000	PEN compliance reports prepared by the SNE.	All types of air conditioners that meet the minimum requirements established in the 2017 standard of the Standards and Industrial Technology Directorate of the Panamanian Industrial and Technical Standards Commission.
Electric and hybrid vehicles in the automotive fleet (total).	Number of electric and hybrid vehicles	2,312	2019	3,107	SNE reports.	Government and private vehicles and transportation fleet.
Specific development objective 2: Improve the financial and social sustainability of the energy sector and ease the fiscal burden by reducing the cost of subsidies in the sector and targeting them more effectively.						
Photovoltaic cell installation programs in homes that receive subsidies, registered and evaluated by the MEF.	Number	0	2019	1	Record of MEF SINIP registration and evaluation.	
Average cost of electricity generation.	US\$/MWh	125	2019	125	ASEP statistics.	

² The targets for the energy outcome indicators are subject to confirmation by the SNE.

Indicators	Unit of measure	Baseline value	Baseline year	End of project (2021) ²	Means of verification	Comments
Specific development objective 3: Strengthen institutions in the areas of energy planning and purchasing.						
Energy purchase bidding processes with international standards providing for various energy sources published by ASEP.	Number of bids	1	2019	2	SNE report.	Bids must include various sources, including nonconventional renewable energy.
Electric transmission expansion plans published by ETESA.	Number of expansion plans published	0	2019	2	Electric transmission expansion plans published by ETESA.	
Specific development objective 4: Improve interagency coordination in the water and sanitation sector with defined strategic planning and clear assignment of roles of all sector agencies.						
Implementation milestones for the "Action Plan to Improve Water Sector Governance" completed.	%	0	2019	40	CONAGUA report on the degree of progress made with respect to the "Action Plan to Improve Water Sector Governance".	
Operator of water and sanitation services for IDAAN technical assistance hired.	Operator	0	2019	1	Contract signed between IDAAN and the operator.	
Implementation milestones for the first phase of the "National Water Culture Program" completed.	%	0	2019	50	CONAGUA report on progress on the "National Water Culture Program".	

OUTPUTS

Indicators	Unit of measure	Baseline year	Baseline value	End of project (2021)	Means of verification	Comments
Component 2: Sustainable development of the energy sector						
Subcomponent 2.1. Development of a sustainable energy matrix						
2.1.1 Guidelines of the Energy Transition Agenda (ATE) of Panama submitted to Cabinet Council for approval.	Guidelines	2019	0	1	Guidelines of the Energy Transition Agenda submitted by the SNE for Cabinet Council approval.	
2.1.2 Approval of the National Electric Mobility Strategy (ENME), which promotes low emission transportation and contributes to the fulfillment of Panama's climate commitments under the Paris Agreement.	Strategy	2019	0	1	Cabinet Council Resolution 103 of 28 October 2019 approving the Electric Mobility Strategy and creating the Electric Commission in effect.	
2.1.3 Sustainable Construction Regulations approved by the Ministry of Public Works/Technical Engineering and Architecture Board.	Regulation	2019	0	1	Ministry of Public Works/Technical Engineering and Architecture Board Resolution 035 of 25 June 2019 approving the Sustainable Construction Regulation in effect.	
2.1.4 Study on financial and institutional system alternatives for financing the SNT reinforcements through the fourth transmission line converging with SIEPAC to improve regional electric energy exchanges, developed by ETESA.	Study	2019	0	1	Study including financial and institutional system alternatives for financing and execution of the IV transmission line in Panama by ETESA prepared and submitted to the Bank.	
2.1.5 ASEP approval of the 2019 Electricity Transmission Expansion Plan aligned with the Regional Indicative Expansion Plan of the Regional Electricity Market.	Plan	2019	0	1	ASEP Resolution 16062 of 28 April 2020 approving the 2019 Electric Transmission Expansion Plan in effect.	

Indicators	Unit of measure	Baseline year	Baseline value	End of project (2021)	Means of verification	Comments
Subcomponent 2.2. Improvement and consolidation of the sector's institutional capacity						
2.2.1 Publication of the updated 2015-2050 National Energy Plan (PEN).	Publication	2019	0	1	SNE communication with a link to the SNE website where the updated 2015-2050 National Energy Plan is published.	
2.2.2 Wholesale electricity energy market purchasing rules containing models for long-term electric energy contracting specifications that take into account multiple sources and generation technologies, approved by ASEP.	Publication	2019	0	1	ASEP Resolution 13242 of 4 April 2019 approving the wholesale electricity energy market purchasing rules in effect.	
Subcomponent 2.3. Rationalization of subsidies in the energy sector						
2.3.1 Progress made in analyzing the replacement of the subsidy for consumption of electricity from non-utility-generation with photovoltaic systems.	Study	2019	0	1	Study on replacement of the subsidy for consumption of electricity from non-utility-generation with photovoltaic systems submitted to the Bank by the SNE.	
2.3.2 Progress made in analyzing the subsidies and Business Development Plan – Solar Water Heaters.	Study	2019	0	1	Subsidy replacement study and Business Development Plan – Solar Water Heaters submitted to the Bank by the SNE.	
2.3.3 A new rate structure that reflects cost-efficient delivery criteria, approved by ASEP.	Publication	2019	0	1	ASEP resolutions approving the new rate structure in effect, reflecting cost-efficient criteria, for each of the country's three distribution companies.	
Component 3: Sustainable development of the water and sanitation sector						
Subcomponent 3.1: Improvement and consolidation of the sector's institutional capacity						
3.1.1 2015-2050 National Hydrological Security Plan (PNSH) in execution with budget resources allocated by the MEF.	Plan	2019	0	1	Minutes of CONAGUA and Water Council meeting approving periodic PNSH execution monitoring reports (minutes of	

Indicators	Unit of measure	Baseline year	Baseline value	End of project (2021)	Means of verification	Comments
					the first Water Council meeting of 8 August 2019 and second Water Council meeting of 19 September 2019). Memo from the MEF attaching the monthly budget items for the execution of the annual work plan corresponding to the year in which the disbursement is made.	
3.1.2 CONAGUA Technical Secretariat operating under the Ministry of the Presidency with a technical/administrative structure and budget allocation for its operations.	Structure	2019	0	1	Cabinet Resolution 60 of 3 July 2019 transferring the Technical Secretariat to the Ministry of the Presidency, which chairs CONAGUA, in effect Memo from the CONAGUA Technical Secretariat (STC-093-2020 of 7 August 2020) submitting to the IDB: (i) the budget allocation for 2020 and the report identifying and describing the technical/administrative structure of the Technical Secretariat.	
3.1.3 Progress made in institutionalizing the delivery of sanitation services by strengthening the PSP coordination unit at MINSA for the expansion, operation, and maintenance of sanitation systems, making the PSP more efficient.	Coordination unit strengthened	2019	0	1	Letter of commitment from the Ministry of Health setting out the latter's commitments in connection with the PSP.	
3.1.4 Top priorities for meeting objectives in the water sector approved by CONAGUA, and an action plan approved to improve water sector governance in Panama.	Plan	2019	0	1	CONAGUA Resolution 001 of 13 February 2020 approving the priority water sector issues and the action plan to improve governance.	

Indicators	Unit of measure	Baseline year	Baseline value	End of project (2021)	Means of verification	Comments
Subcomponent 3.2: Strengthening of water and sanitation service delivery management						
3.2.1 Contracting process launched by IDAAN for a water and sewer service operator that will provide technical assistance in technical, business, administrative, and planning areas, in order to contribute to improving water service quality for the population of the Panama City Metropolitan Area.	Hiring process	2019	0	1	IDAAN Resolution 65-2020 authorizing negotiation with the second offeror for the hiring of a water and sanitation services operator. Minutes of the Loan Contract negotiation signed 9 November 2020 between IDAAN and the second offeror for the referenced contract.	
3.2.2 Strategy approved by IDAAN for financial sustainability in the medium and long term, taking the form of a financial strengthening plan emphasizing: (a) greater operating cost efficiency; (b) higher revenue from nonrate activities; (c) transparency in both subsidy targeting and frequency of transfers received from the government; and (d) higher revenue from rate adjustments.	Strategy	2019	0	1	IDAAN Executive Board Resolution 111-2020 approving the medium- and long-term financial sustainability strategy and the financial strengthening plan.	
3.2.3 Plan approved by IDAAN to improve service for users with disabilities as part of IDAAN's inclusion policies.	Plan	2019	0	1	IDAAN Executive Board Resolution 112-2020 approving the Plan to Improve Service for Users with Disabilities as part of IDAAN's inclusion policies.	

Indicators	Unit of measure	Baseline year	Baseline value	End of project (2021)	Means of verification	Comments
3.2.4 Technical standards approved for the design and construction of rural aqueducts, to establish the applicable minimum engineering requirements for ensuring their capacity, stability, vulnerability, and structural safety, according to the specific conditions of the project site.	Regulations	2019	0	1	Resolution 389 of 27 April 2020 approving the Technical Standards for the Design and Construction of Rural Aqueducts.	
3.2.5 Approval of a rural aqueduct governance strategy with a gender perspective.					Ministry of Health Resolution 114 of October 2020 approving the rural aqueduct governance strategy with a gender perspective.	
Subcomponent 3.3: Promotion of water security in the country						
3.3.1 Interagency Coordinating Committee created to structure the National Water Resource Information System.	Committee	2019	0	1	Technical Cooperation and Assistance Agreement for the creation of the National Water Resource Information System signed by CONAGUA members in April 2018 creating the committee and Addendum 1 of June 2019 setting out the articles from the original agreement.	
3.3.2 Progress made by CONAGUA in conducting studies on multipurpose projects to increase water availability.	Studies	2019	0	1	CONAGUA Technical Secretariat report specifying the multipurpose projects identified to increase water availability and preparedness. Prefeasibility studies of the multipurpose reservoirs contracted.	
3.3.3 Agreement reached to coordinate work on the implementation of a National Water Culture Program in Panama, which will formulate,	Program	2019	0	1	Interagency Coordination Agreement for the implementation of a National Water Culture Program signed.	

Indicators	Unit of measure	Baseline year	Baseline value	End of project (2021)	Means of verification	Comments
promote, and strengthen a culture of proper water use, conservation, and management throughout the country with the organized, collaborative involvement of different institutions in the water sector.						
3.3.4 Agreement reached to coordinate work on the implementation of a governance strategy for managing risks related to extreme hydrometeorological events with the objective of identifying a methodological framework for the development and execution of a five year work plan for the comprehensive management of disaster risks associated with hydrometeorological events with the organized, collaborative involvement of different government institutions in the water sector.	Strategy	2019	0	1	Interagency Coordination Agreement signed for the implementation of a governance strategy for managing risks related to extreme hydrometeorological events.	

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-___/20

Panama. Loan ___/OC-PN to the Republic of Panama
Support Program for Reforms in the Water, Sanitation,
and Energy Sectors II

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with the Republic of Panama, as Borrower, for the purpose of granting it a financing to cooperate in the execution of the Support Program for Reforms in the Water, Sanitation, and Energy Sectors II. Such financing will be for the amount of up to US\$200,000,000, from the resources of the Bank's Ordinary Capital, and will be subject to the Financial Terms and Conditions and the Special Contractual Conditions of the Project Summary of the Loan Proposal.

(Adopted on ___ 2020)