

The growth deceleration was mostly due to (i) shocks to the financial sector, and (ii) decline in private consumption growth <sup>2</sup>

These were also augmented by the revenue deficit grants recommended by the 15<sup>th</sup> Finance Commission, amounting to over 7 percent of GSDP in FY20/21.

Water Supply and Sanitation (WSS) services across India are under pressure from rapid population growth, urbanization and climate change impacts.

The Non-Revenue Water (NRW) due to leakages, unauthorized connections and other inefficiencies is estimated at 40-60 percent, contributing to low Operations and Maintenance (O&M) cost recovery of typically 30-40 percent. The urban WSS sector has traditionally been managed through government departments and sector agencies with a high level of subsidies for CAPEX and OPEX and less focus on cost recovery and revenue generation.

In 2019, GoI also launched the Jal Jeevan Mission (JJM) Rural and Urban to provide piped drinking water to all households by 2024.

Safeguarding existing water and sanitation services, and rebuilding better to improve their quality, reliability and coverage, is critical to contain the pandemic and to recover from it.

The WSS sector challenges continue to be severe, including weak institutions; a focus on infrastructure creation rather than service delivery; intermittent supply against rapidly increasing demand in the tourist towns; flat tariffs and gaps in metering; inadequate monitoring of water quality and systems for grievance redressal; growing stress on dependable, perennial and sustainable water supply sources; inadequate upgrading and augmentation of existing WSS schemes; and low cost recovery and heavy reliance on subsidies from GoHP, including high energy costs.

This has put heavy strain on the historical WSS infrastructure which retains a capacity of only 40 million liters daily (MLD) against the current demand of 56 MLD.

A core achievement supported by the Shimla DPL-1 was the creation of the Shimla Jal Prabandhan Nigam Limited (SJPNL), a corporatized WSS company for the state capital with full operational autonomy and responsibilities for WSS services, financial sustainability and customer accountability.

It has maintained stringent water quality standards, with an impressive track record that includes no further outbreak of jaundice; reduction of transmission losses by 20%; increase in the supply of water by 25%; and increase in sewage collection by 200%

An increasing block volumetric tariff with annual indexation of 10% has been implemented and 100% of connections in Shimla city are now metered compared to the DPL-1 baseline of 20% metered connections. Prior to the onset of COVID-19, the company had completed three cycles of metered volumetric billing, nearly tripling its revenues.

GoHP has put in place the key pillars of WSS utility reforms including integration of WSS functions under a single company governed by a Board of Directors (BoD) with full autonomy and enabling policies for performance orientation, professional organisation structure, engaging with private sector, and funding commitment for a medium term investment plan. In parallel, SJPNL has stabilized the water crisis and brought under control the water quality and bulk water availability. Although confidence of citizens and elected representatives has improved, there is need for improving services beyond what was achieved in managing the 2018 water crisis.

So far, it has addressed the jaundice and water crisis through improvements in water quality, increases in bulk water supply and achieving assured daily supply. SJPNL is now focusing on citywide improvement in WSS service including 24/7 supply, increased coverage in sewerage facilities from 60% to 100%, and treatment of 100% of wastewater, reducing GHGs, including methane capture and sludge management. Given the high bulk water costs in Shimla, the SJPNL needs to reduce water loss and energy consumption to control costs, improve revenue and maintain subsidies within the levels committed by GoHP.

These are: a) developing SJPNL as a well governed professional WSS utility with systematic business planning, corporate governance and performance focus, b) increasing operational efficiency, including energy efficiency, NRW reduction with associated GHG emissions reductions, smart metering, collection efficiency, tariff revision, and customer accountability, and c) improving services to deliver citywide 24/7 water supply and 100% sewerage coverage and treatment.

The proposed project will help the GoHP to address climate change and disaster vulnerabilities by strengthening the quality and sustainability of water and sanitation services in the targeted areas, thus supporting adaptation and improving the resilience of the population. The proposed operation will also strengthen climate change mitigation, for example by reducing water losses and supporting measures to improve energy efficiency of water supply systems.

The policy and institutional reforms with the underlying investment program will improve WSS services and reduce costs associated with the collection and storage of water, as well as instances of waterborne diseases, especially benefitting the poor.

This also supports the attainment of the goal to enhance water use efficiency by 20% by 2030 under the National Water Mission (one of eight missions of the National Action Plan on Climate Change).

The proposed operation is aligned with the World Bank Group COVID-19 Crisis Response Approach Paper.

**Mobilizing Finance for Development:** The proposed operation will support public sector reforms, including improving operational and financial sustainability of services through an autonomous and accountable WSS Company and thus strengthening its capacity to improve services. This will gradually improve the creditworthiness of the WSS Utility and enhance the chances of mobilizing market funds and future private financing.

As a partner of the GoHP since the start of the reforms in the capital Shimla, the Bank has established strong relationships and local expertise that are now informing the proposed operation and will help mitigate risks.

The GoHP will provide grants to meet the capital expenditure required to achieve the service standards, focusing on policy and institutional reforms for improving governance, increasing efficiency of WSS operations, and increasing customer orientation and accountability.

**Phased Approach for rolling out the WSS MTP:** The MTP will be rolled out in phases, with the first phase already launched to address the jaundice and water crisis in the Greater Shimla Area comprising Shimla city and its peri-urban areas.

WSS in peri-urban areas are provided by the Jal Shakti Department (former Irrigation and Public Health Department or IPH). Under the MTP the SJPNL will continue to be responsible for WSS services in Shimla city and bulk water supply to Jal Shakti Department in the peri-urban areas.

**Financing of the WSS MTP:** The MTP is financed by the State budget and various national missions such as AMRUT, Smart City Mission, Swachh Bharat Mission (SBM) Urban, and the JJM.

The first phase of this program was initiated in Shimla under the Bank-supported DPL-1, which contributed US\$ 40 million in financing to address the water crisis issues.

Notably, AMRUT is being implemented in Shimla with a special focus on increasing the WSS network coverage with metering and online MIS-based monitoring systems. It has supported the improvement and augmentation of existing water supply schemes from catchments areas, adding capacity to the water treatment plants, renovating the water supply network and increasing sewerage network connectivity in the city. GoHP has committed to provide O&M subsidies to address the high cost of bulk water in Shimla. The state also supports the National Action Plan on Climate Change by promoting water use efficiency through regulatory and pricing mechanisms as per the State Strategy and Action Plan on Climate Change, which has a set target of efficiency improvement of 20% by 2030.

**Achievements of the Government Program and Future Focus:** The first phase of the MTP was launched in 2018 in the Greater Shimla Area and resulted in the formation of SJPNL as a corporate WSS entity with support from the World Bank (DPL-1). In the first two years of the MTP, SJPNL has achieved impressive service and governance improvements as detailed in Annex 11. With support from the proposed PforR, the first phase of the MTP in Shimla will continue until 2026, assisting SJPNL during the COVID-19 pandemic and deepening the reforms and service improvements already introduced. In the future phases of the MTP the GoHP will extend the MTP to economically important urban clusters in the rest of Himachal Pradesh.

As reflected in the theory of change (Figure 1 below), the proposed PforR seeks to improve on this by complementing infrastructure inputs with appropriate policies, institution building, regulation, and accountability measures.

Goals focusing on safely managed WSS services

This will support the Sustainable Development

Shimla and bulk water supply to peri-urban areas within Shimla Planning Area.

(c) Improved water supply and sewerage services in Shimla city.

Each results area builds on the achievements of the past two years under the DPL-1 for Shimla and aims to systematically maintain, institutionalize, and deepen prior reforms and improvements. The three results areas are: a) Improved governance, managerial and financial autonomy; b) Improved efficiency, financial sustainability, and customer accountability; and c) Improved water supply and sewerage services.



Results Area 1: Improved governance, managerial and financial autonomy of SJPNL: The SJPNL will solidify best practice business planning and corporate governance, introduce performance incentives for staff and contractors, and further improve its organizational structure, inclusiveness, managerial and financial autonomy. Specifically:

(a) Strategic Business Planning and Corporate Governance Practices

(i) Under the PforR, the SJPNL will develop a Strategic Business Plan, including a Performance Improvement Plan, to help meet operational, commercial, and financial WSS performance targets.

The performance targets will include reducing emissions in WSS through energy efficiency, NRW reduction, and wastewater management.

(ii) The GoHP and SMC have published the WSS performance standards and the tariff and subsidy policy which provide a framework for WSS regulation in Shimla.

The tariff and subsidy policy of GoHP provides for automatic annual indexation to reflect cost increases. Any further tariff revision (beyond cost pass-throughs) requires the proposal by the Managing Director to be reviewed by the BoD for recommendation to the GoHP for ratification and approval. The GoHP has already approved a subsidy of up to Rs 120 crores per annum to meet the high cost of bulk water in Shimla. Activities aiming at improving commercial and financial performance are relevant from an adaptation standpoint as these will allow SJPNL to more effectively respond to climate-induced disasters. This will enable more funds channeled to infrastructure maintenance and a smaller chance of assets becoming overwhelmed or damaged during disasters such as floods.

Performance incentives will make it easier for SJPNL to take the steps necessary to improve operational efficiency and financial sustainability, thereby also making the sector more resilient to the climate change related droughts and floods foreseen for the future, while reducing sector GHG emissions from energy use.

SJPNL will enter into performance-based contracts with private operators which will include targets for service delivery and operational efficiency (e.g. continuous water supply, NRW reduction, billing and collection efficiency and grievance redressal). SJPNL has already started procurement of a performance-based contract for intra-city water distribution.

(e) Improving Financial Autonomy: GoHP has issued a cost recovery, tariff and subsidy policy to ensure the financial sustainability of SJPNL. As per this policy, a volumetric tariff will be applied to all customers, tariffs will be adjusted automatically every year without the need for approval, and further tariff proposals will be reviewed by the BoD before submission to GoHP for approval. Subsidies will be budgeted by GoHP based on the cost recovery trajectory and provided directly to SJPNL

The PforR will support the implementation of key policy measures required for financial sustainability which includes (i) volumetric tariff for all customers (already implemented by SJPNL and all new connections under the PforR will be metered), (ii) annual indexation and automatic adjustment of tariff for change in input costs and (iii) timely release of subsidies as budgeted. Further, the PforR will also support SJPNL in modernizing its accounting practices including (a) accounting, budgeting and cash management policies and systems, (b) migrating to industry standard accounting systems (Tally or equivalent) and (c) internal audit.

Achieving a financially sustainable and accountable utility that provides continuous, universal water supply will be critical for public health in Shimla and will contribute to a recovery of the tourism industry which has been badly affected by the pandemic.

Results Area 2: Improved efficiency, financial sustainability, and customer accountability: WSS services in Shimla are one of the most expensive in India, since bulk water is pumped up over 1400- 2000 meters elevation. Therefore, efficiency in terms of water and energy use in WSS services is critical to achieve financial sustainability. The MTP emphasizes the need for reduction of energy consumption and NRW, along with implementing demand side measures such as increasing block volumetric tariff and 100% metering, which are expected to lead to GHG emission reductions. The WSS services rely on extensive GoHP subsidy at present which will continue, but SJPNL is required to improve O&M cost recovery so as to limit the growth in subsidy requirement in the future.

Under the PforR, the SJPNL will build on these initiatives to achieve the agreed results:

(a) Energy efficiency improvement and NRW reduction: The energy consumption per unit of water distributed will improve by 20 percent, that is, from 13 KWH of energy consumption per kiloliter (KL) of water delivered at the balancing reservoir to 10.4 KWH per KL, through a package of electrical and hydraulic measures in bulk water pumping and transmission under the Government program. Under the PforR, the performance contracts for the distribution system will reduce NRW by 15%.

Reduction of apparent losses and demand side measures will increase revenue realised. The Program will upgrade the existing mechanical meters to Smart Meters for automatic meter reading and real time monitoring of water consumption. Reducing water leakages will increase water availability for the residents and tourists and help them enhance their resilience to climate change exacerbated droughts/water shortages, and increased temperatures.

(b) Commercial and financial improvements: The GoHP subsidizes WSS services at present and has committed to continue the subsidies since bulk water is expensive in Shimla and full O&M cost recovery is not considered possible. The implementation of WSS program is expected to increase WSS O&M costs due to increase in bulk water production and wastewater treatment. Therefore, to ensure that the gap in cost recovery is within the committed subsidies, SJPNL is required to improve O&M cost recovery. Billing and collection efficiency will improve with a new software for improved facilities for on-line payments. An index to measure the operating efficiency of SJPNL will be developed and tracked. It will include NRW, Energy Efficiency, water consumption data, and cost recovery.

Automatic annual indexation of tariff along with incentives for improving operational efficiency will increase O&M cost recovery to above 50% in 2026 as compared to 21% at present and increase intra-city O&M cost recovery from 120% at present to 175% by the end of the Program. SJPNL will also carry out detailed financial forecasts under the Program. Automatically adjusted water service tariffs are expected to lead to more rational consumption of water, reduced operating costs, and reduced vulnerabilities to the effects of water shortages and climate change-induced weather events such as droughts and floods.

- (i) M&E system: SJPNL will strengthen its existing M&E system to comprehensively track service delivery, operational, financial and customer satisfaction metrics.

Disaggregated performance of service delivery of SJPNL for various customer groups, including poor and vulnerable sections will be gathered.

The GoHP has issued performance standards for WSS, based on which SJPNL has finalised a performance scorecard which will evaluate SJPNL on a) customer service, b) financial performance and efficiency, c) organizational processes and modernization, and d) implementation of the investment plan.

Results Area 3: Improved water supply and sewerage services: The existing WSS services provide intermittent water supply of 2 to 3 hours daily and 60% coverage through sewerage network. Under the proposed Program, the SJPNL will provide safely managed and improved WSS services targeting 24/7 supply for all residents and 100% coverage with sewerage network. New assets for water distribution and sewerage network will be built and will incorporate resilience principles.

Specifically h

- (a) Service Improvement and Asset Management: Under this Results Area, SJPNL will improve service quality. SJPNL is already implementing continuous water supply initiatives in three demonstration zones and the distribution network for 24/7 supply will now be extended to all zones, across the entire city. SJPNL will also expand the sewerage network. About 100 kms of sewer network will be added in uncovered areas. A water quality lab will be constructed for more frequent and accurate quality monitoring. Water storage reservoirs will be provided with water quality sensors and automated distribution arrangements. Performance-based contracts (see Results Area 1) will also help improve and maintain service standards. The performance-based contracts include criteria linked to climate-related elements for efficient energy and water use.

This will help categorize and rehabilitate existing bulk water assets and implement energy efficiency improvements.

(b) Digitalization of WSS management systems: To improve service quality and asset management, the PforR will support SJPNL to digitize its WSS management systems. A water distribution management system is proposed for the water supply system. The PforR would provide electromagnetic/ultrasonic bulk meters, flow control valves, pressure reducing valves and measuring instruments like pressure gauges for the water supply system. This system will also be compatible with the Supervisory Control and Data Acquisition (SCADA) system being provided for bulk water operation under the Government program. In addition, SJPNL will build critical digital assets using geospatial data like a Geographic Information System (GIS)-linked customer database, asset database, billing and collection database, IT applications for accounting, costing and budgeting and customer relations.

Table 2: Program Financing Summary

Source	Amount (USD milion)	% of Total
International Bank for Reconstruction and Development (IBRD)	160	64
Government of Himachal Pradesh (GoHP)	90	36
Total Program Financing	250	100

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

33. The PDO is to strengthen the operational and financial performance of the SJPNL Utility and improve access to water supply and sewerage services in Shimla City.

- (b) SJPNL achieves operational efficiency and financial sustainability: (i) SJPNL improves energy efficiency by 20%; (ii) SJPNL reduces Non-Revenue-Water by 15%; (iii) O&M Cost Recovery in water distribution is at least 175%; and
- (c) Number of people benefitting from improved WSS services (i) Number of people having access to continuous water supply; (ii) Number of additional people provided with sewerage services

Number of additional  
people provided with sewerage services.

Number of additional people  
provided with sewerage services.

The DLI#1

supports corporate governance and performance orientation in SJPNL, while DLIs #2 to #6 incentivize crucial aspects of utility performance, notably operational efficiency and financial sustainability.

non-revenue water reduction, citizen satisfaction score) targets; and (e) the capacity of SJPNL to achieve the DLIs in a timely manner during the implementation period of the Program.

The award of performance-based contracts for intra-city water distribution incentivized by this DLI constitutes an important step towards this goal. The contracts will be based on performance-based payments conditioned on achievements of continuous pressurized water supply, NRW targets and efficiency in redressal of customer complaints. An independent agency will determine the performance-based payments based on an audit of operator performance.

Under DLI #2, SJPNL will receive incentives for reduction in energy consumption for every unit of bulk water delivered to the reservoirs. SJPNL is targeting a reduction of at least 20% in energy consumption of water delivered at the balancing reservoir.

Reduction in NRW will also increase revenue and decrease the requirement for GoHP subsidies

This DLI incentivises routine tariff indexation to offset cost increases. A systematic cost recovery, tariff and subsidy policy has been put in place by GoHP under which the BoD of SJPNL is authorized to index tariff annually.

This provision for tariff indexation was exercised in April 2019.

This DLI addresses cost recovery which is critical to the long-term sustainability and autonomy of SJPNL.

DLI #4 will incentivize routine tariff indexation. In addition to these, efficient billing and collection are also needed to improve revenues. SJPNL has already installed meters in all connection and implemented 100% volumetric billing. A new billing and collection software has been installed. DLI #5 will track the improvement in O&M cost recovery in water distribution. GoHP will continue to provide subsidies for bulk water.

It will be responsible for financial control and management and citizen engagement, including GRM.

They have already approved the WSS MTP of the GoHP which includes policies such as the tariff, subsidy, and cost recovery policy.



SJPNL will have a dedicated Program Management Unit (PMU) under the MD-cum-CEO, comprising of sector experts for implementing the project, including water supply, sewerage, finance, procurement, IT, Environment, Social Safeguards, Program Monitoring, Independent Verification Agency (IVA) and auditors. SJPNL will further strengthen its capacity by engaging two global experts for advising on technical and utility management

The SJPNL has already entered in a private sector contract for augmenting bulk water supply. It is planning to strengthen its implementation capacity by entering into performance-based contracts with the private sector for intra-city water supply and sewerage service improvement program.

The SJPNL will be responsible for implementing the customer database, and monitoring systems, billing and collection systems, and grievance redressal mechanism.

SJPNL will carry out a citizen engagement and communication program to get feed-back on the design and implementation of the policies, institutional development and WSS service delivery improvement program for Shimla city.

SJPNL will also engage a professional agency to conduct direct outreach with citizens with the aim of identifying and addressing concerns of stakeholders, as well as facilitating behavior change in users that might be needed to optimize benefits from a 24/7 water supply.

The allocations to each DLI have been agreed with GoHP based on the relative importance of each DLI in achieving the overall Program objectives and the need to align the scale of financial incentive with the effort required to achieve the DLIs (Table 4). Of the total PforR amount of US\$ 160 million, 12% is allocated to Result Area 1 (DLI # 1) on improved governance, managerial and financial autonomy of SJPNL, 58% to Result Area 2 (DLIs #2 to #6) on improvements in operational efficiency, financial sustainability, and customer accountability, and 30% to Result Area 3 (DLI#7) on improved water supply and sewerage services.

The state will budget for both its share and the World Bank share under the budget head of the Externally Aided Projects under the Urban Development Department (UDD).

The first tranche of budget and fund flow will be transferred without conditions by the Finance Department. However, for subsequent tranches the UDD will be required to submit utilization certificates for 60 percent of the earlier releases as per the state General Financial Rules.

The amount of DLI disbursed by the Bank will be transferred to SJPNL through GoHP/ UDD, on a back-to-back basis to ensure adequate liquidity.

<sup>7</sup> Financing allocation includes front-end fee for the Loan.

The capacity building program aims at strengthening the technical, managerial, and financial capacities of the SJP

To achieve these aims, the capacity building program has been grouped into two categories: day-to-day technical operations and other aspects of utility management.

distribution network extensions); (ii) carry out O&M of its systems including professional asset management; (iii) adopt techniques and strategies to reduce non-revenue water; (iv) monitor and manage water and effluent quality; (v) achieve Operational and Energy Efficiency; (vi) manage Digital Tools to improve utility management (GIS, SCADA etc.

(b) Utility Management Aspects of Capacity Building: These trainings will develop management capacity across core departments including financial management, business planning, HR management, Environmental and Social Governance, contract management, performance monitoring, and customer orientation and grievance redressal.

International Utility Experts: SJPNL will be strengthened with two international utility experts - a technical expert who will guide the technical capacity program and a management expert who will guide the utility management aspects. Their key tasks will include advice on technical, commercial and financial practices.

This will include (a) an E-library containing a comprehensive database of relevant documents for water utility management, (b) Training center for SJPNL staff and other WSS utilities, (c) Communities of practice for utility professionals: virtual platforms to connect with its peers at the national and international level.

This institutional study outlined a pathway to reform including corporatization, ownership and management options, clustered development, a cost recovery roadmap and regulatory mechanism. The PforR Program is consistent with these strategic studies and consultations. By strengthening the WSS utilities, (b) Traditional for business infrastructure creation is a pathway to WSS policy including corporatization, financial sustainability, (b) WSS ownership institutions building professional and performance orientation, c) service delivery and accountability to WSS customers.

**Technical Soundness:** The proposed PforR operation has been developed based on the lessons of the ongoing reforms in Shimla under the DPL-1, including extensive consultations with stakeholders in several workshops.

The GoHP has already undertaken in-depth consultations on such a possible expansion in order to ensure its technical and institutional coherence with ongoing reforms in Shimla.

**OP 7.50 on International Waterways:** The activities financed under the Program are limited to rehabilitation, minor expansion, and improvement of the existing WSS system and will not adversely change the quality or quantity of water to other riparians of the Sutluj River.

However, the economic slowdown in FY19/20 and the impact of the COVID-19 pandemic in FY20/21 has led to a deterioration in state finances, with the deficit increasing to 3.4 percent and 4.6 percent of GSDP respectively.

Furthermore, the program financing of US\$250 million over five years is small relative to total average expenditures of the government of US\$ 4.7 billion, on average, yearly between FY16 and FY20.

**Financial Analysis:** The Program supports SJPNL in strengthening its financial autonomy with a roadmap for improving O&M cost recovery through tariffs and committed subsidies for bulk water. It is poised to achieve significant improvements in service levels, including moving from intermittent supply to city-wide 24/7 water supply and 100% sewerage connections. The financial analysis shows that while the WSS O&M costs projected in FY 26 in the absence of efficiency measures are double the costs in FY 20, the Program incentivizes several operational efficiency improvements, including reduction of NRW by 15% and energy efficiency improvements by 20%, thus moderating the water production requirements and the cost of production. As a net effect of these measures, the WSS cost in FY26 are brought down to 1.3 times FY20 costs as compared to 1.98 times without the operational efficiency improvements.

In addition, the revenue collection improves as a result of the new volumetric tariff and subsidy policy. The conversion of shared connections which were paying a single flat monthly charge to individual connections improves the billing and collection.

The operational efficiency improvements and the volumetric tariff and subsidy policy help in improving O&M cost recovery for SJPNL (details in Annex 4).

Based on a detailed benefit-cost analysis, the Economic Rate of Return (ERR) for the Program is estimated at 25.3%.

The likely quantifiable direct and indirect benefits due to the proposed Program interventions are: (i) Benefits due to reduction in operational costs: The Program targets reduction in NRW and improvements in energy efficiency leading to savings in O&M costs. (ii) Benefits due to incremental water supply: With the Program interventions, the availability of treated and potable water in Shimla is expected to increase from 40 MLD currently to 60 MLD by 2030 and 107 MLD by 2050. (iii) Benefits due to savings in coping cost: The Program is expected to reduce / eliminate the usage of water tankers in Shimla and increase resilience to climate change impacts.

The non-domestic customers, especially hotel, institutional and construction customers will benefit the most due to their much higher dependence on tanker supply.

Additionally, the program will reduce the domestic cost for water storage tanks, water purification system and the annual cost of water purification. (iv) Health benefits from improved water supply: The improvement in water quality will result in health benefits due to reduction in diseases associated with poor quality of water for resident population as well as tourists in Shimla.

The implementing entity SJPNL functions under the robust corporate governance and financial accountability requirements of the Companies Act 2013, applicable to all companies in India.

Program FM systems have been assessed for the effectiveness of planning, budgeting, accounting internal controls, funds flow, financial reporting, and auditing. SJPNL Procurement Systems were assessed for effectiveness of the planning, bidding, evaluation, contract award, and contract administration procedures and found to have processes and procedures for effective implementation of the Program with fiduciary risks identified and proposed for mitigation.

With implementation of these mitigation measures (Annex 8), fiduciary systems of SJPNL are considered adequate to provide reasonable assurance that Program funds will be used for the intended purpose.

SJPNL is the main entity implementing the Bank Program in HF. The SJPNL was incorporated in June 2018 and has since achieved the following: (a) implemented an off-the-shelf financial accounting software; (b) established an independent board with adequate delegation of powers; (c) guided operations by a financial management manual under Generally Accepted Accounting Principles; (d) used an IT solution for billing and collection; and (e) audit report for FY 19-20 has been issued by a Chartered Accountant firm appointed by the CAG.

The proposed Program is expected to have positive effects for both resident and tourist population, that include reduction in coping costs of collection and treatment of water and instances of waterborne diseases, especially benefitting the poor; increase in coverage and quality of service to the consumers; effective engagement of key stakeholders through a communication strategy; establishment of monitoring systems and effective redressal of grievances. The Program will involve civil works such as laying and repair of water supply distribution, sewage disposal pipeline networks, water quality labs, storage tanks and resource center. In addition, GHG emission reductions resulting from NRW reduction and energy efficiency will add to the environmental benefits.

The ESSA focused on environmental and social management systems (Core principle #1), natural habitats and cultural properties (Core principle #2), public and worker safety (Core principle #3), land acquisition and livelihoods (Core principle #4), and the needs and concerns of vulnerable groups (Core principle #5).

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the proposed WSS infrastructure under the Program has included only water supply distribution pipelines and sewerage network, the likely impacts/risks will be limited.

These can be managed through strengthening EHS in contract management, and effective supervision. As the initiatives under the Program are aimed at improved governance, enhanced resilience, efficient and accountable WSS services, broader benefits to the environment outweigh these low-to-moderate risks.

There is also basic capacity within SJPNL for managing construction related EHS issues. Gaps in bidding processes and provisions on EHS will be addressed through the proposed capacity strengthening activities (PAP, Annex 8).

The study assessed that given the nature of works involved, there would be no involuntary land acquisition resulting in resettlement impacts or loss of livelihood.

However, the social risks and impacts could be of a temporary nature, including: i) possible encroachments in land required for building infrastructure such as storage tanks; ii) temporary restrictions to water supply when laying pipelines; iii) challenges in affordable and quality water supply to the customers, particularly the vulnerable households; iv) compliance to labor regulations by contractors engaged in laying of pipeline networks, including adherence to COVID-19-related protocols; v) effective communication and customer outreach so that customers are aware and benefit from the program, and vi) mechanisms for effective redressal of grievances.

Gaps in ensuring bids/contractual provisions and risk mitigation measures will be addressed through the proposed capacity strengthening program (PAP, Annex 8).

While critical reforms such as the separation of policy making, regulation and oversight, asset ownership and service delivery have been successfully implemented and accepted, the SJPNL remains a relatively new institution with limited precedent and is thus vulnerable to political change and governance risks.

To mitigate this risk, the GoHP has begun a series of consultations and communication programs with concerned stakeholders in the other ULBs to emphasize the need for devolved responsibilities and corporate governance framework for improving services and reducing operational inefficiencies.



The Program also benefits from the experience the state has in implementing comparable reforms in the electricity sector. Nevertheless, the continued implementation of reforms in the operationally complex and fiscally constrained environment resulting from the COVID-19 pandemic will demand high capacity to manage risks in relation to financial sustainability targets.

The goal of the partnership is to support SJPNL in becoming a future-focused utility that provides efficient, resilient, accountable, and sustainable services.

A financial accounting system and framework are in place and able to provide information on the cost of bulk, distribution, and sewerage systems separately.

It will also hire an outreach agency to help conduct household-level interactions aimed at addressing potential questions and concerns from customers regarding issues such as metering, volumetric tariffs, etc.

The operation aims to address the climate change-intensified risks of droughts, extreme heats, and floods which will be further reduced through the concurrent implementation of the National Action Plan on Climate Change, especially regarding the National Water Mission, whose objective is to increase water use efficiency by 20% through regulatory mechanisms. The Program activities are expected to make significant positive contributions to managing the impacts of climate change.

Climate change mitigation and adaptation will be supported not only through the energy efficiency policy, but also by the introduction of performance based contracts under DLI #1, performance incentives for SJPNL under DLI#6, tariff, subsidy, and cost recovery policies under DLI# 4 and # 5 and the program to reduce NRW under DLI #3.

onwards.

This allowed economic activity to resume from the second quarter (July to September 2020)

The financing needs of the Gol are expected to rise significantly.

The bulk of the required financing is expected to be sourced from domestic markets which have enough liquidity, with minor contribution from international borrowing.

In the first phase, the GoI tackled the health aspects, and partnered with the Bank for a \$1 billion health project.

In the third phase, GoI focused on economic stabilization and reducing the costs of the lockdown.

The Bank financing of \$750 million is supporting this program to provide liquidity for their balance sheets, to mitigate against potential solvency problems and job losses, and to lay the foundations for a stronger MSME financing ecosystem in the recovery phase.

In addition, the Bank is exploring innovative ways of support to the state and central governments through upcoming operations in the education and health sector.

Some upcoming projects have specific COVID-19 components supporting this pillar, e.g., Fisheries Sector COVID-19 Response and Recovery, and Resilient Kerala Program for Results.

The upcoming engagement with the National Disaster Management Agency on Seismic Risk Mitigation Project is one such example.

The Japanese International Cooperation Agency (JICA), Asian Infrastructure Investment Bank (AIIB), the New Development Bank (NDB) and International Fund for Agriculture (IFAD) are also exploring potential parallel financing in upcoming operations.

The PDO is to strengthen the operational and financial performance of the SJPNL Utility and improve access to water supply and sewerage services in Shimla City.

Number of additional  
people provided with  
sewerage services.







(b) Financial decisions  
pertain to all financial  
management decisions and  
commercial decisions  
related to billing and  
collection, apart from tariff.

The information on energy consumption will be based on electricity bills for water production and distribution systems. The information on volume of water delivered for distribution (KL) at the main balancing reservoir will be based on measurement at the outlet of main balancing reservoir for the same period. The information on the energy consumed for the distribution will be based on the electricity bill for the distribution system. Efficiency will be calculated as follows.

The volume of water billed to the consumers will be measured by SJPNL on monthly basis through consumption meters.

O&M Cost Recovery for water distribution is expressed as percentage of revenue from water supply to the cost of operating and maintaining water distribution services.

In addition IVA will verify on sample basis bulk water metering and consumer metering data available on the M & E system.

Revenue for water supply will be obtained from M & E system and will exclude any revenue for sewage services.

costs, chemicals and consumables, repair and maintenance, administrative expenses etc. Cost of sewage services and treated bulk water supply to Shimla (till the balancing reservoir) are excluded.

This  
would also apply to new  
connections providing at  
least 30 days of continuous  
water supply.

This would also apply to new connections providing at least 30 days of continuous water supply.

Number of additional people provided with sewerage services.

c. Number of people benefitting from continuous water supply including residents and tourists.

Each water connection is assumed to benefit 0.8 residents and tourists. IVA will review data from the M&F system, billing and collection system and independent audit reports of Operator performance.













Plan  
(d) Organizational  
Structure and Annual Staff  
Plan  
(e) Revenue  
projections including year  
wise projected tariff and  
demand  
(f) Cash flow  
projections with cost  
Recovery & subsidy  
requirements  
(g) Systems for  
financial Management,  
Customer Grievance  
Redressal and M&E.



This would also apply to new connections providing at least 30 days of continuous water supply.

SJPNL will maintain the data on billing and collection from water supply connections in the billing and collection software and M&E system.

The survey would focus on (a) access to water supply and sewerage services, (b) water quality and quantity, (c) reliability and affordability, (d) customer service related to WSS services, and (e) willingness to use e-services.























The information on energy consumption will be based on electricity bills for water production and distribution systems. The information on volume of water delivered for distribution (KL) at the main balancing reservoir will be based on measurement at the outlet of main balancing reservoir for the same period. SJPNL will update the data in the M&E system, based on which Energy Efficiency will be calculated.

The total electricity bill (in Rs) will be calculated taking into consideration the power costs, the energy charges such as demand charges, peak hour charges and the power factor. The total electricity bill will be divided by the unit rate per KWH of energy for normal hours as per tariff order of Himachal Pradesh Electricity Regulatory Commission, to get the equivalent KWH for calculating energy efficiency.

SJPNL will update the data in the M&E system, based on which Energy Efficiency will be calculated.

In addition, IVA will verify the Energy Efficiency data submitted by the private operator to SJPNL.

In any year, the reduction achieved will be calculated taking the lowest of the annual average energy consumption achieved in any of the earlier years as the reference point.

Billed authorised consumption will include billed water supply to the SMC area and billed bulk water supplied to Jal Sahkti Vibhag, commercial institutions and other housing societies in peri urban areas of Shimla.

The volume of water billed to the consumers will be measured by SJPNL on monthly basis through consumption meters.

In addition IVA will verify on sample basis bulk water metering and consumer metering data available on the M & E system.

SJPNL will maintain the record of government notification on tariff indexation.

IVA will verify from the M & E system and billing and collection software that the indexed tariff has been applied in the water bills.

O&M Cost Recovery for water distribution is expressed as percentage of revenue from water supply to the cost of operating and maintaining water distribution services.

costs, chemicals and consumables, repair and maintenance, administrative expenses etc

Cost of sewage services and treated bulk water supply to Shimla (till the balancing reservoir) are excluded.

Revenue for water supply will be obtained from M & E system and will exclude any revenue for sewage services.

Improved WSS service refers to (a) Provision of continuous water supply,  
and (b) Provision of functional sewerage connections.

to new connections providing at least 30 days of continuous water supply

This would also apply

This

would also apply to new connections providing at least 30 days of continuous water supply

Data on pressure and hours of water supply at pre-determined measurement points in the distribution network.

c. Number of people benefitting from continuous water supply including residents and tourists.

Each water connection is assigned to one of 98 residential supply units.

IVA will review data from the M&E system, billing and collection system and independent audit reports of Operator performance.

As per the

formula, disbursements are linked to additional persons provided with sewage services compared to the prior project year

i.e. 272,000 per year under targeted values.

IVA will verify the records of the volume of sewage received at STP through the M & E system to confirm the additional flow of sewage into STPs.

The jaundice outbreak in 2016, stemming from the contamination of the water supply as well as the 2018 supply crisis that led to severe rationing measures, have spurred the GoHP into a

Critical repairs have been carried out in the bulk water system leading to an improvement in supply from 33 MLD to 40 MLD. GSWSSC also initiated the upgrading of bulk water supply and preparation of three demonstration zones for 24/7 supply.

In order to implement its vision and water policy, the GoHP in 2018 laid out a roadmap for sector reforms and notified a WSS MTP for improvement of WSS services. The MTP includes:

- a) universal access to piped water supply and sewerage
- b) continuous pressurized water supply (24 / 7), and c) 100% water quality and effluent compliance.

Energy efficient operations

Under the MTP, the SJPNL will increase energy efficiency measures and will target to reduce unit cost (KwH/ m3) by at least 10% by 2025.



It supports financing of the bulk water supply and distribution system for Shimla city including NRW reduction program, SCADA and automation, sewerage system, O&M program, M&E system, GRM, and capacity building activities.

The PforR operation (US\$ 250 million), comprising US\$160 million of IBRD financing and US\$90 million of GoHP financing, aims at improving the WSS distribution system for moving to 24/7 supply and 100% sewerage connections, along with improvements in operating efficiency, financial sustainability, and customer accountability in Shimla city. Investments are supported by commitments towards sustainable O&M of WSS services in Shimla city recognizing the high cost of bulk water.

**Expenditure financed by PforR:** The expenditure program for the PforR operation will support category B (low risk investments) for water quality monitoring and improving distribution system in Shimla city through upgrading and expanding existing distribution system, including small pumping systems, pipe networks, storage tanks, SCADA and automation, digitization, and customer connections.

The PforR operation supports service delivery improvements by improving the water supply distribution system and expanding sewerage networks in Shimla city. This includes upgrading and expanding the existing distribution system, including small pumping systems, pipe networks, storage tanks, SCADA and automation, digitization, and customer connections.

- (i) **Transmission of Bulk Water Supply to Storage Tanks:** This activity will support transmission of water supply from Main Balancing Reservoir (MBR) to storage tanks in the distribution system. This activity involves upgradation and replacement of existing pipes to transmit water to storage tanks at the DMAs. The activity includes installation of small pumping systems and distribution transmission line. Due to geographical features, some of the transmission lines will require small pumping systems to convey water to the storage tanks located at higher elevations as per the hydraulic modelling undertaken by SJPN. Transmission pipelines will be laid to connect the balancing reservoirs with the storage tanks in the distribution system.
- (ii) **Water Distribution System:** This activity will include laying of transmission pipelines to connect the MBR with the storage tanks at the DMAs. Also, some existing storage tanks will be upgraded to make these compatible with hydraulic design for continuous pressurized water supply.
- (iii) **24/7 Water Supply System:** Within Shimla city, the distribution network improvements will be undertaken to provide city-wide continuous water supply at the customer connection point. Two small Balancing Reservoirs (BRs) will be constructed as required by the hydraulic model for 24/7 water supply to maintain pressure and the agreed service delivery parameters. The main purpose of these BRs is to ensure equal distribution of water supply to the various DMA. These small BRs will be constructed using Reinforced Cement Concrete (RCC) with storage capacity of approximately 7 MLD each, to cater to the water demand in their respective service areas. This distribution network will be regulated through SCADA enabled automated system. In addition, DMA level water storage will be augmented.
- (iv) **NRW Reduction Program:** The NRW reduction program, including leak detection, will be carried out through bulk water meters, pressure reducing valves (PRVs), and AMR meters at the customer connection point. There are 43 DMAs proposed for Shimla city for NRW reduction and installation of pressure control valves. The NRW in Shimla city would be reduced by installation of pressure control valves, replacement and metering of household connections and a comprehensive program of leak detection and pressure management.
- (v) **SCADA and Automation:** SCADA enabled fully automated Bulk Water Management System will be implemented to measure, record and regulate water flow and water levels in the storage tanks. This will include water quality, pressure management and residual chlorine in the distribution network. Digital assets will be created covering customer database, geospatial data, infrastructure, finance, billing and collection and customer service data. A central command centre will be established under this activity to facilitate real time operational information.
- (vi) **Sewerage Services:** The Program will provide sewerage connectivity to unserved areas through expansion of existing networks and increasing coverage from 60% to 100% through household and commercial connections.

The expansion and extension will help achieve 100% sewerage coverage in Shimla city. The sewerage network within Shimla city will be upgraded to ensure improved sewerage services. The sewage collected will be treated in the STPs under the larger GoHP program, outside the PforR operation. This will include manpower costs, energy charges, and repair and maintenance. SJPNL will hire services of two international utility experts to advise the SJPNL on technical and utility management practices to achieve the performance-based targets at the MTP.

This will focus on on-job trainings, workshops, exposure visits and association with world class water utilities for experience sharing, learning and development.

The activities financed under the Program are limited to rehabilitation, minor expansion, and improvement of the existing WSS system and will not adversely change the quality or quantity of water flows to other riparians.

It will a) Improve governance, managerial and financial autonomy of SJPNL, b) Improve efficiency, financial sustainability and customer accountability, and c) Improve water supply and sewerage services in Shimla city.

(a) Result Area 1: Improved governance, managerial and financial autonomy: The proposed Program will support SJPNL to strengthen the implementation of the corporate policy and institutional development program initiated under the DPL. The SJPNL will develop its Strategic Business Plan including corporate strategic focus and priority areas, and key performance indicators on quantity and quality of water, billing and collection, cost recovery, NRW, etc.

SJPNL will strengthen and implement the performance-based contracts with private operators, with incentives linked to achievements of the related performance indicators. Financial autonomy of SJPNL will be strengthened by timely tariff revisions and increase in revenue earnings.

(b) Result Area 2: Improved efficiency, financial sustainability, and customer accountability: The Program will incentivize 100% metering with volumetric tariffs, NRW reduction, energy efficiency improvements, billing and collection efficiency, and grievance redressal measure. Automatic tariff indexation will be carried out on an annual basis. The NRW in the water distribution network will be reduced by 15% below the baseline which will be determined in year one of the operation. The SJPNL will upgrade the metering program to Smart Metering. Energy efficiency improvement programs will be taken up to reduce energy consumption in pumps and transmission systems. The financial sustainability of SJPNL will be measured by the extent of volumetric billing, collection efficiency, and O&M cost recovery for WSS services. The M&E system will be upgraded and linked to key indicators of service delivery performance.

(c) Result Area 3: Improved Water Supply and Sewerage Services

The SJPNL will implement the distribution improvement program through performance-based contracts with private operators on targets for continuous water supply, NRW reduction, billing and collection efficiency, and grievance redressal measures.

It is in line with the State Water Policy which aims at making adequate, safe and sustainable drinking water facilities available for all urban areas in the state, with an emphasis on 24/7 access to water and metering of connections

Citizens had poor confidence in water quality and the tourism industry suffered due to the water crisis

The Program supports sustained economic contribution from the tourism sector. Moreover, subsidy savings due to increased cost recovery expected to result in lesser grant-in-aid from the government

This institutional study outlined a pathway to reform including corporatization, ownership and management options, clustered development, a cost recovery roadmap and regulatory mechanism. The Program is consistent with these strategic studies and consultations by emphasizing departure from the traditional focus on infrastructure creation in favor of a) WSS policies for operational and financial sustainability, b) WSS institutions with autonomy and performance orientation, and c) service delivery and accountability to customers.

It targets service delivery, environmental sustainability, operational efficiency and financial sustainability for both water supply and sewerage service. The expenditure program addresses both infrastructure and service delivery requirements on a parallel basis.

As a priority activity, SJPNL has focused on stabilizing water quality and bulk water availability to cope with the public health and water crisis.

The supporting actions for these are in place with the GoHP program financing adequate bulk availability from perennial sources and adequate wastewater treatment cap. Demonstration projects have already been taken up by SJPNL to provide 24 / 7 water supply. SJPNL also has the freedom to enter into performance-based contracts with private sector to achieve these results, which are already in procurement stage.

SJPNL has the autonomy and the resources needed to achieve results: The expenditure required to meet the service improvements are fully funded under the PforR and by GoHP financed program. SJPNL has the necessary autonomy to take up activities to achieve governance and efficiency improvements. It has been authorized to institute performance incentive policy and to enter into performance-based contracts with the private sector. The tariff structure authorizes SJPNL to carry out annual indexations. SJPNL also has full financial and operational autonomy for all WSS related matters.

The GoHP has already undertaken in-depth consultations on a possible expansion in order to ensure its technical and institutional coherence with ongoing reforms in SJPNL.

The monitoring system would also record data on financial management, commercial management, technical operations, contract management, institutional performance, social and environmental considerations and grievance redress system. The IT Department would be responsible for feeding data into the monitoring system.

There shall be suo-moto disclosure of key information (physical, financial, administrative) on the company website.

The program activities include upgradation of the financial management and accounting systems of SJPNL to international standards.

The service providers would also be responsible for implementing the customer database, and monitoring systems, billing and collection systems, and GRM.

SJPNL has the necessary governance arrangements for performance monitoring and reporting: The BoD of SJPNL se monitors the operational performance of SJPNL and the Independent Directors are responsible for regular review of operati performance and corporate governance

It will be responsible for financial control and management and citizen engagement, including SJPNL will also be responsible for ensuring conformance with environmental and social safeguard

Independent engineers will oversee the performance of private operators under the performance-based contri

This partnership provides SJPNL with guidance on strategic planning and creating modern WSS utility systems within SJPNL, including advice on contract management.

SJPNL has already entered into a DBO contract for bulk water offtake, treatment and transmission from river Sutlej. The payment to the operator is linked to actual volume of water delivered, water quality, energy efficiency and water loss. The SJPNL has also initiated procurement of an Operator for implementation of continuous pressurized water supply project in Shimla city.

The institutional assessment of the SJPNL has been undertaken on the following aspects: (i) Strategic Orientation and Planning ; (ii) Corporate Governance, Strategic Leadership and Autonomy; (iii) Organizational Structure, Capability, and Human Resource Management (iv) Technical Operations, (v) Commercial Operations, (vi) Financial Management and Monitoring Systems, and (vii) Customer and Services Orientation.

Compared to the institutional baseline of the GWSSC in 2014, the SJPNL has put in place several frameworks, processes, structures and policies during the last three years, which puts it on a good footing for future initiatives. The organization has achieved a higher score on the maturity rating on Commercial Operations (metering and establishing a tariff policy), Corporate Governance, Strategic Leadership (structure of the BoD and providing a tenure to the MD cum CEO, etc).

## H. Financial Analysis

The Program supports SJPNL in strengthening its financial autonomy with an efficient tariff structure and committed subsidies for bulk water. It is poised to achieve significant improvements in service levels, operational efficiency, and cost recovery. Shimla already has one of the highest costs of supply due to the high altitudes to which bulk water is pumped. The Program improves bulk water availability by 33%, increase in water supply from 2 hours daily to 24/7 supply city-wide, increase in sewerage coverage by 40% and wastewater treatment volume by 2.5 times. While this increases the WSS O&M cost in FY 26 by 1.98 times the cost in FY 20, the Program incentivizes several operational efficiency improvements, including reduction of NRW by 15% and energy efficiency improvements by 20%, thus moderating the water production requirements and the costs of production. As a net effect of these measures, the WSS cost in FY26 are brought down to 1.3 times FY20 costs as compared to 1.98 times without the operational efficiency improvements.

Revenue collection improves as a result of the new tariff and subsidy policy. All customers are charged on an increasing volumetric tariff basis. The conversion of shared connections, which were paying a single flat monthly charge irrespective of consumption, to individual connections improves the billing and collection.

The operational improvements and the new tariff and subsidy policy stabilize the finances of SJPNL. Table 3 and Figure 3 present the implications on cost recovery and subsidies under two scenarios: (a) without the operational efficiency improvements and the tariff policy, and (b) with operational efficiency improvements and the tariff policy.



without efficiency improvements and tariff policy, the WSS O&M cost recovery falls from 21% in FY20 to 14.4% in FY26, mainly due to increasing costs of bulk water supply and wastewater treatment. Even after FY26 there is a further fall since tariff is not revised regularly, and by FY30 the O&M cost recovery reaches 11.8%. As a result, the annual subsidy requirement increases rapidly from Rs 120 crore in FY20 to INR 255 crore by FY26, and INR 336 crore by FY 3. These are well above the subsidy level of INR 120 crore committed by GoHP.

However, with the operational efficiency improvements and implementation of the tariff policy there is significant improvement in O&M cost recovery and reduction in the subsidy requirements. Under this scenario, the WSS O&M cost recovery improves rapidly to 40.2% by FY26 mainly due to NRW reduction, energy efficiency improvements and annual tariff revision. Thereafter, with annual tariff revision, there is a steady increase in O&M cost recovery reaching 48.1% in FY30. The subsidy requirement stays well below the GoHP commitment, at Rs 115 crores in FY26.

The projected annual subsidy requirements are within the GoHP commitments of INR 120 crores per annum. The Program recognizes the high cost of WSS services in Shimla and pursues a strategy of increasing O&M cost recovery while providing targeted GoHP subsidies to offset the high cost of bulk

The quantifiable direct and indirect benefits due to the proposed Program interventions are: (i) Benefits due to reduction in operational costs - reduction in NRW and improvements in energy efficiency leading to savings in O&M cost; (ii) Benefits due to incremental water supply - availability of water supply is expected to increase from 40 MLD in FY 2020 to 107 MLD in 2050; (iii) Benefits due to savings in coping cost - reduction in usage of water tanks, especially benefitting the non-domestic customers, including hotels, and reduction in the domestic cost for water storage tanks, water purification systems, etc); (iv) Health benefits from improved water supply - reduction in several diseases - diarrhea, dengue, malaria associated with poor quality of water, valued as the opportunity cost of person days lost due to Disability Adjusted Life Years - DALYs, (WHO estimates 20

The State achieved the targets of eliminating the revenue deficit and maintained surplus as prescribed in the F during FY 2015-18 due to increase in central devolutions as per the recommendations of 14th Finance Commi

The state has spent INR 1559 crore for the development of water supply and sanitation sector which is 7 % of development expenditure during 2018-19

Table 5: Expenditure on Water Supply and Sanitation				
Year	Revenue Expenditure	Capital Expenditure	Total Expenditure	Percentage change
2015-16	882.1	318.0	1200	8
2016-17	1137.4	392.6	1530	27
2017-18	982.9	461.6	1444	-6
2018-19	1141.4	417.7	1559	8
2019-20 (RE)	1139.5	586.4	1726	11

Source: State Finances: A Study of Budgets, Reserve Bank of India (various years)

42. The State has a significant focus on capital expenditure on water and sanitation program over the past few years. The program financing of US\$173 million over five years is small relative to total average expenditures of the GoHP which is US\$ 4.7 billion, on average between FY16 and FY20.

SJPNL is in the process of procurement of operator for 24/7 water supply project in Shimla. The project will help the city in making transition towards 24/7 water supply. In addition, SJPNL has recently signed an agreement for a Bulk Water Project to treat and transmit water to the main storages in Shimla.

Both these projects have a provision as a part of the overall program design, wherein the private operator will prepare SIPs need to be in approved by SJPNL.

SJPNL as the implementing agency for the program has benefited from institutional capacity developed and progress already made under the DPL.

Nevertheless, the continued implementation of reforms, in the operationally complex and fiscally constrained environment resulting from the COVID-19, will demand high capacity to manage risks, in particular in relation to financial sustainability to





Reasonable assurance: A Fiduciary System Assessment (FSA) was carried out for the Program implementing agency, SJPNL

Program FM systems have been assessed for the effectiveness of planning, budgeting, funds flow, accounting and financial reporting, internal controls, and auditing.

The FSA was also informed by: (i) Corporate Governance and Financial Accountability (CGFA) Assessment of SJPNL conducted during June - November 2020, and (ii) MAPS assessment of State of HP during 2018-20, conducted by World Bank with assistance of Ministry of Finance GoI, as part of India CPAR.

SJPNI follows the HP Financial Rules, IPH procurement guidelines, CPWL procurement manual, and its own Delegation of Financial Powers for procurement activities.

(i) Financial Management: The key risks to the development outcomes are the non-availability of a Chartered Accountant (CA) heading the Finance function, low frequency of internal audit (presently annual), functionality and implementation gaps in the billing and payments software, and the absence of a nuanced system of costing.

Addressing these risks would require strengthening the Board and Senior Management to include finance professionals, plugging gaps in the billing and payments software, updating the Financial Management Manual (FMM) and implementing a system of costing for service delivery.

It is responsible for water and sewerage services in Shimla City. Being the Implementing Agency for the Program, SJPNL would be the recipient of Program funds. The FSA, therefore, covers the financial management and procurement systems at SJPNL.

Balance Sheet: At the end of the financial year 2019-20, SJPNL had a fixed asset base of INR 167.51 crores (after depreciation) and receivables of Rs. 25 crores linked with the gross value of Fixed Assets transferred. With unutilized grants of Rs. 26.18 crores. Operations: during the year it generated revenue from water and sewerage charges amounting to INR 26.18 crores. The deficit is largely made good by grants from GoHP to the tune of INR 112.55 crores. SJPNL is significantly dependent on the state government for its financial sustenance. State support is provided in the form of subsidy/ revenue deficit grant from the UDD.

SJPNL Procurement: Based on the activities identified under the Program, main procurable items are performance based works contracts for bulk water supply and transmission, water distribution lines and storage tanks, NRW reduction, extension of sewerage network, rehabilitation and capacity addition of STPs, and SCADA system, M&E System, GRM, global water utility partnership, and capacity building activities.

SJPNL has stipulated use of e-procurement for all procurements estimated at or above INR 5 lakhs and uses rate contracts issued by Controller of Stores (GoHP) and IPH.

Annual budget is prepared for each of the four cost centres separately and clear distinction is made between revenue and capital items.

SJPNL prepares a six-year investment plan on infrastructure.

The works to be procured are decided based on priorities and availability of funds.

<sup>9</sup> Bulk water, water distribution, sewerage, and head office.

Budget execution: SJPNL earns revenue from water and sewerage charges. It also receives maintenance grants as well as capital grants from the UDD. SJPNL operates its own bank accounts for funds management. It has implemented a customized software for online billing and collection (for water and sewerage charges) since financial year 2018-19.

The FMM requires the maintenance of accounts separately for Water Production, Water Distribution, Sewerage, and Head Office.

Aspects like segment reporting and costing of water supplied are also not detailed out in the FMM.

Additionally, the Finance Department prepares reports on cost recovery, cost per kilo-litre, and energy cost and submits to the MD-and-CEO and the Board.

Contract Administration: HPFR prescribe guidelines for receipt of goods, acceptance, taking them to stock, issuing, and so on. The Rules also cover maintenance of fixed asset register, annual stock verification, and disposal of obsolete and unserviceable goods.



SJPNL is in the process of revising and strengthening the FMM to cover several weaknesses including covering processes and accounting in a computerized setup Internal controls in the area of water and sewerage charges billing and collections need to be strengthened.

Office with the data in the billing software.

There is no procedure in place for reconciling collections reported to Head

To meet the requirements under the Bank loan, the auditors shall supplement the audit report with a certification of the expenditure made on the Program as agreed with the Bank which shall be a subset of the overall activities of SJPNL.

This audit report will be submitted to the Bank within 9 months of close of the financial year i.e.

Public disclosure of information: SJPNL has put up the FMM as well as the water and sewerage tariff policy on its website.

Doing so would introduce greater transparency of its financials.

(ii) to take all appropriate measures to prevent Fraud and Corruption in connection with the Program, including (but not limited to) adopting and implementing appropriate fiduciary and administrative practices and institutional arrangements.

Weak FMM

FMM to be upgraded to include, amongst other topics, accounting process flows, system of scientific costing, financial MIS

3.

The Bank would support SJPNL in implementing the mitigating actions to address the risks identified in the FSA.

The team would also assess, at each Mission whether there are any significant changes to the assessed fiduciary risks and/or new risks have emerged and work with SJPNL towards addressing such risks

Regulatory: The investments pertaining to water supply pipeline, sewerage pipe network, and other civil works are not governed by regulations/procedures pertaining to environment clearance.

The Environmental Specialist will also receive support from the available capacity within the contractor, consultants, and third-party monitoring agencies.

These procedures should include aspects related to WSS quality, WSS treatment plants, integrating EHS with bid/contract documents, and engaging in source protection initiatives.

Specifically, the investments pertaining to water supply pipeline and sewerage piped network are not governed by regulations.

Assessment against the core principles: The ESSA focused on social management systems, public and worker safety, land acquisition and livelihoods, and the needs and concerns of vulnerable groups.

In case of forest land, the FCA clearances need to be obtained. The review of past practices indicated that SJPNL requests the Revenue Department to identify unencumbered land and the department undertakes screening to ascertain that lands selected for construction are free from any encumbrances. No requirement for land acquisition or land transfer from individuals or community is foreseen for the construction activities.

During the implementation, it will be required to ensure that all such activities ineligible for PforR financing remain excluded.

Environmental: Any improvement of WSS management in Shimla will result in positive environmental impacts. The possible negative environmental impacts include construction-related environmental, health and public safety impacts, which have to be managed under the Program.

However, the environmental standards and guidelines, particularly on different Worksite and Waste Management, will be relevant and need to be adhered. As the infrastructure activities related to the water distribution pipelines and sewerage network will be within the urban areas, the likelihood of using forest land will be low.

While the proposed environmental staff plans are adequate, substantial focus needs to be given to training and capacity building throughout the project period.

A particular focus on integrating EHS management in contracts and contract administration will be required.

No private land will be acquired for the present PforR works and therefore R&R and livelihoods impacts are avoided.

By the end of Year I, the Program shall: (i) establish and maintain documented environment and social systems and procedures within SJPNL; (ii) review and strengthen all the contract provisions pertaining to EHS and construction stage aspects, including impacts and labor engaged for civil works, particularly pertaining to water supply pipelines and sewerage network; (iii) review and strengthen monitoring and reporting procedures on testing, EHS provisions in civil works, source protection activities, labor welfare and construction stage mitigation measures; (iv) develop training plan and engage in orientation and refresher training on EHS management, management of social aspects, communication strategy and IEC material for SJPNL staff, contractor staff and consultants on an ongoing basis and (v) lastly, streamline half-yearly monitoring and progress reports of ESHS performance of the construction contracts. As part of the Program Action Plan, it is planned to build capacity within SJPNL on (i) environmental systems and procedures with a focus on streamlining the monitoring and supervision aspects and (ii) augmenting processes and strengthening procedures to manage social aspects relating to communities and construction labor (Refer Annex 8).

Recommendations for implementation support: The Bank should focus largely on further building the environmental management capacity of SJPNL that includes competence building in managing ESHS issues in construction contracts, streamlining internal systems and procedures, and networking with other stakeholder departments on environmental issues should be strengthened.

systems and  
procedures with a  
focus on  
streamlining the  
monitoring and  
supervision  
aspects.





Disaster Risk Projections: The percentage change in the spatial distribution of Soil Moisture Deficit Index (SMDI) between 1970s and 2030s has been used for defining the Drought Index.

Impact on Water Resources.

Any change in the behavior of water resources will have

adverse impact on the overall economy of the state.

The

Program activities are expected to make significant positive contributions to managing the current and anticipated impacts of climate change.

This will be achieved through renewable energy

development for reduction of emissions by harnessing solar power potential, but also the impact of operational efficiency reforms.

NRW reduction

will reduce pumping demand, thus reducing the emissions and contributing to water-use efficiency.

Water storage reservoirs with water quality sensors and automated distribution arrangements will help maintain water supply during disaster and climatic shocks by ensuring a more stable supply to the utility and the end users.

The Bank team, comprising WSS Utility experts, will focus on advising SJPNL on the WSS Utility and corporate governance practices, verification of the DLIs, monitoring the compliance with program agreements, progress in achieving PAP actions, and managing potential emerging risks.



Srinivasa Rao Podipireddy, Senior Water Supply and Sanitation Specialist, SSAW1, Role Team Member

7.