



1. Project Data

Project ID

P079032

Project Name

HOUSING & COMMUNAL SERVICES

Country

Russian Federation

Practice Area(Lead)

Urban, Resilience and Land

L/C/TF Number(s)

IBRD-48880

Closing Date (Original)

30-Nov-2012

Total Project Cost (USD)

200,000,000.00

Bank Approval Date

26-Feb-2008

Closing Date (Actual)

31-Dec-2021

IBRD/IDA (USD)
Grants (USD)

Original Commitment

200,000,000.00

0.00

Revised Commitment

200,000,000.00

0.00

Actual

200,000,000.00

0.00

Prepared by

Cynthia Nunez-Ollero

Reviewed by

Vibecke Dixon

ICR Review Coordinator

Kavita Mathur

Group

IEGSD (Unit 4)

2. Project Objectives and Components

a. Objectives

According to the Loan Agreement (LA, p. 5) and the Project Appraisal Document (PAD, paragraph 23), the Project Development Objective was "to improve the quality and financial viability of the housing and communal services (HCS) of the participating cities."

This review will parse the PDO into two objectives against which project performance will be assessed:

- To improve the quality of the HCS of the participating cities



- To improve the financial viability of the HCS of the participating cities.

b. Were the project objectives/key associated outcome targets revised during implementation?

No

c. Will a split evaluation be undertaken?

No

d. Components

1. Support to HCS reform implementation at the federal level (US\$2.3 million at appraisal; US\$5.1 million actual). This component was to finance the implementation of HCS reform at the federal level. Activities to be financed include (i) the preparation of the legal and regulatory framework, (ii) piloting the HCS monitoring systems, and (iii) disseminating project results and good practice across the country.

2. Support to HCS reform implementation at the sub-national level (US\$6.7 million at appraisal, US\$4.6 million actual). This component was to finance technical assistance (TA) to improve HCS service provision in three reform areas: (i) improving financial viability of communal services providers, (ii) strengthening social protection of HCS consumers, and (iii) creating market competition in housing management and maintenance. These reforms were to be implemented in 10 target cities (Bratsk, Orenburg, Saransk, Cheboksary, Volzhsky, Naberezhnye Chelney, Novokuibyshevsk, Ivanovo, Nefteyugansk, and Tula). The four cities of Dimitrovgrad, Pyatigorsk, Cherepovetz, and Arkhangelsk were to be "back-ups". In addition, this component was to finance capacity enhancement of these 10 target cities and other regional and municipal administrations, communal services providers, and consumers. The component was to finance four subcomponents: (i) utility reform, social protection and housing, and how-to-guidance on selected reform topics; (ii) evaluation of municipal reform program implementation; (iii) knowledge exchange among the participating cities; and (iv) public awareness campaign on HCS reforms in the participating cities.

3. Preparation and implementation of HCS investment plans (US\$185.8 million at appraisal, US\$179.2 million actual) The 10 cities with 90,000 - 600,000 population were to receive an average investment of US\$50 per capita. This component was to finance the preparation, implementation, and supervision of municipal investment plans, feasibility studies, and technical designs to rehabilitate and modernize existing HCS infrastructure in the 10 participating cities.

4. Project management and monitoring of results (US\$5.2 million at appraisal, increased to US\$5.9 million according to the Task Team, US\$10.6 million, actual). This component was to finance project management and operating costs, including TA to implementing agencies for monitoring and evaluation (M&E). Restructuring and LA amendment (see below) were to add new activities to support the Ministry of Construction and Housing and Communal Services (MOCHCS) to prepare a new project concept focusing on comprehensive urban development and socioeconomic impact to develop built-up areas in small and medium-sized towns informed by best practices and standards recognized by International Financial Institutions (IFIs). (ICR, paragraph 25).

e. Comments on Project Cost, Financing, Borrower Contribution, and Dates



Project Cost: The original project cost was US\$ 200.0 million. The Task Team confirmed that the loan disbursed US\$199.5 million. The government is in the process of refunding the Bank the unused balance of the loan proceeds (US\$572,911).

Financing: The International Bank for Reconstruction and Development fully financed the loan.

Borrower Contribution: The government originally committed US\$6 million at appraisal then increased this to US\$132 million. The government disbursed the full amount of its revised contributions.

Dates: The Board approved the project on February 26, 2008 with an original closing date of November 30, 2012. The LA was signed on September 2009 with a revised original closing date of June 1, 2014. The Mid Term Review (MTR) was conducted on April 13, 2014. The project was extended five times for a total of 90 months (i.e., 7.5 years) to close on December 31, 2021. The project was implemented over a 13 year period. The following were significant dates of the project, including six level 2 restructurings:

- On February 26, 2008 the Board approved the project with an original closing date of November 30, 2012.
- On September 16, 2009 the LA was signed. The autumn 2008 government reorganization dissolved and replaced the original implementing agency, the Federal Agency for Construction, Housing and Communal Services (Rosstroj), with the newly formed Ministry of Regional Development of the Russian Federation (MORD). Without a formal project restructuring, an exchange of official letters revised the original closing date to June 1, 2014.
- On June 28, 2013 the closing date was extended for the first time to May 15, 2016 to complete contracted activities and reallocate funds among disbursement categories.
- On December 7, 2015, to extend the closing date a second time to May 15, 2018 because no one was authorized to process project contracts during the 2013 and 2014 government reorganizations. The Ministry of Construction and Housing and Communal Services (MOCHCS) replaced the MORD as the implementing agency. Changes were also made to the components (see above), cost allocation, implementation schedule, disbursement categories, and only revised the corresponding target end date of all indicators (not target values) in the results framework. The change in component was to support the MOCHCS to prepare a new project concept emphasizing a comprehensive urban development and socioeconomic impact in targeting the development of built-up areas in small and medium-sized Russian towns.
- On July 13, 2017, to extend the closing date a third time to December 31, 2020; introduce changes to the results framework due to changes in components, cost allocation, and disbursement categories because of two additional investment subprojects in the cities of Ivanovo and Naberezhnye Chelney.
- On July 27, 2020 to extend the closing date a fourth time to September 30, 2021.
- On June 17, 2021 to extend the loan closing date a fifth time to December 31, 2021 because of the delays caused by COVID19.
- On December 9, 2021 to reallocate funds between disbursement categories.

Split Rating: A split rating of the outcome is not warranted. The PDOs were not changed. Three new intermediate results indicators were added to the results framework in the 2017 restructuring to monitor the results of two additional investments in two cities; to increase the target value of beneficiaries from these two additional investments (ICR, paragraph 22).



3. Relevance of Objectives

Rationale

Country Context: The Russian Federation initiated a housing and communal services (HCS) sector reform as a priority in its 2006-2008 Medium-Term Government Program. The local governments in the Russian Federation manage the delivery of HCS. Local governments inherited inefficient Soviet practices in delivering the services in this sector. HCS was acknowledged as one of the last sectors requiring market economy reforms. The HCS sector was marked by declining quality, delayed investments into communal infrastructure, and non-reliable supply. Underlying causes of poor HCS were both lack of investments and weak institutions. Environment pollution, dilapidated infrastructure, residents' lack of understanding of the underlying legislative and institutional issues of the sector, and government reforms needed for continuous reliable supply of HCS services, required immediate steps. The HCS was deemed as critical to the quality of life of the Russian citizens and the country's economy. By 2022 Russia's national development goals through 2030 focused on improving living standards and creating comfortable living conditions for its citizens. The PDOs of this project addressed both institutional and policy reforms to improve delivery of HCS and improving infrastructure investments.

Country Plans: The Russian Federal Government's development goals through 2030 included improving living standards and creating comfortable living conditions. Within the framework of its goal for a comfortable and safe environment, the country was to improve housing conditions for at least five million families annually, improve the urban environment quality index, reduce by half emissions of dangerous pollutants with the most negative effect on the environment and human health. The PDOs and the project activities contributed to these aspirations. A Russian Presidential Order "On National Goals and Strategic Objectives in the Development of the Russian Federation up to 2024" set improving housing and urban environment as a priority. An Executive Order on Russia's national development goals through 2030 reinforced the goal of comfortable and decent living conditions and infrastructure for Russia's population. The PDOs were relevant to these goals. The MOCHCS was to implement a target program for the period 2019 - 2025 to "Support for the modernization of utility and engineering infrastructure subjects (municipalities) of the Russian Federation." The program targeted the improvement of the quality of the HCS sector by upgrading and modernizing the HCS infrastructure, reduce the vulnerabilities of the housing stock, foster the development of market competition in providing and managing HCS sector services, ensure sustainable development of the utilities sector with increasing efficiency, and introduce innovations.

World Bank Partnership for the Country: The 2012-2016 Country Partnership Strategy (CPS) for the Russian Federation was the remained valid at closing. According to the Task Team, no new partnership framework was being formulated since the Bank suspended its operations in the country beginning in March 2022 following the February 2022 Russian invasion of Ukraine. The PDOs were relevant to three of the four strategic themes of the CPS, rephrased in the 2020 CPS Progress Report: (i) to increase growth and diversification, to diversifying the economy for sustainable development and growth, (ii) to expand human potential, to improving delivery of communal and social services; and (iii) to improve governance and transparency to improving public sector management and performance. Under the first strategic theme, the project objectives contributed to outcome 6, increased access to quality infrastructure assets and improved infrastructure services. The project addressed the declining quality of HCS sector infrastructure assets and services, and the investment needs of the participating cities. Under strategic theme 2, the PDOs contributed to outcome 11, increased social inclusion of vulnerable groups. The project supported



measures to strengthen social protection of HCS consumers in the participating municipalities. Under strategic theme 3, the PDOs were relevant to Outcome 14: Improved government transparency and accountability.

World Bank Experience in the Sector and in the Country: The Bank financed seven projects in the sector since 1995 (PAD, Annex 2). The World Bank's global knowledge and best practices in the sector provided a comparative advantage in providing an integrated support to modernize the HCS sector as one of the last sectors that need to align with the market led reform of the country. The Bank was noted to have the capacity to integrate macro-economic, financial, technical, social and environmental dimensions of the project, and engage at both national and local levels. Lessons learned from the Bank-financed Municipal Heating and Municipal Water and Wastewater projects informed the mitigating measures to address implementation risks (see Section 9 Bank Performance Quality at Entry below)

Overall, the PDOs were aligned with the country strategy and the World Bank strategy for the country. The objective was outcome oriented and appropriately pitched to the level of development of the HCS sector, and addressed the market reform needs of the HCS sector.

Rating

Substantial

4. Achievement of Objectives (Efficacy)

OBJECTIVE 1

Objective

To improve the quality of the housing and communal services (HCS) of the participating cities

Rationale

Theory of Change: The project was to improve the quality of housing and communal services (HCS) in 10 competitively selected participating cities. HCS communal services include district heating, cold and hot water supply, and waste water disposal. The project was to be implemented in two stages: in stage one, participating cities were to implement HCS reform using their own resources, assisted by technical experts. They then prepared priority investments plans to implement these reforms. In stage two, the cities implement the HCS priority infrastructure investments. The government increased its contributions in 2017 to implement two additional investments. The TOC was logical and provided a causal link to be tested during implementation.

Inputs were to be the TA from experts to reform the HCS sector of the participating cities. These inputs were to include the competitive selection of participating cities, the preparation and adoption of specific reforms, and HCS infrastructure investments plans. Other inputs were to include the implementation of the priority investments in the HCS sector. The inputs reasonably led to the outputs.



Outputs were to be the implementation of specific HCS legal and regulatory reforms and physical investments. The HCS reform programs were to improve social protection, housing stock management, and enable more efficient operation of communal service providers. The 2017 restructuring added two additional investments in two cities. The number of beneficiaries increased as a result. Another output included an internet portal for monitoring HCS performance. The portal would include HCS performance at the regional level, information about best practices in HCS, regulations, methods, guidelines, etc. These outputs logically led to the expected outcomes below.

Outcomes were to be the project beneficiaries' perception of the improved quality of HCS communal services; and the share of professional companies managing multi-family buildings. These outcomes were causally linked to the inputs and outputs above. Other outcomes that were to supplement the intermediate outcome level represented by the number of beneficiaries were the reduced cost to the residents in switching from bottled water to cheaper and clean potable 24/7 water supply (called coping costs). Other outcomes were to include improved living conditions and health benefits due to available in-house water and wastewater connections and plumbing but were not measured as part of this TOC. Wastewater treatments were to improve water quality in Ivanovo Naberezhnye Chelny, and Saranskambient. Residents with improved district heating systems in Bratsk were to benefit from improved quality of services and reduced payments. Similar outcomes were expected in all participating municipalities.

The following assumptions were to increase the likelihood that the objective was to be achieved: (A1): The selected municipalities were capable of implementing the reforms on time (18 months) to access financing for the infrastructure improvements; (A2) qualified firms were available to implement the works and the implementing agency had the capacity to supervise these; and (A3) the enabling regulatory framework was in place and the state and private companies had the capacity to maintain and operate the modernized facilities. These assumptions were borne out at implementation. An additional assumption was not included, that any government reorganization would not delay implementation.

OUTPUTS: There were no reported targets for the following outputs (ICR, paragraph 40). The Task Team explained that the framework nature of the project meant that the participating cities and their needs were to be finalized during implementation.

- 64 municipal legal acts, of which 54 were further approved at the regional or Federal levels
- 38 methodological recommendations on the composition, procedure for the development and approval of programs for the integrated development of communal infrastructure systems of municipalities
- 45 information documents and analytical materials for HCS sector municipal-level reforms, including methodological guidelines for calculating the maximum indices of changes in the amount of citizens' payments for utilities
- automated monitoring system (AMS) of housing and communal services infrastructure work for the participating cities, including a subsystem for analytical assessments
- Development and distribution of the Best Practices Handbook, which included numerous examples of best practices of investment projects in the utilities sector and HCS sector institutional transformations in the project cities and beyond
- Development of an Internet portal "Reform of Housing and Communal Services in Russia" (<https://jkhrus.ru/>); the portal posted information on transformations in the housing and utilities sector and on the implementation of investment subprojects in the participating cities, for replication across Russia.



- 14 cities implemented at least 80 percent of their HCS reform programs. The original target of 10 cities was exceeded.
- 100 percent of municipal HCS investment plans were prepared and implemented, achieving the target.

OUTCOMES:

- Over 3,171,000 people (50 percent female) directly benefited from the improved housing and communal services (the target of 2.5 million was exceeded). Of these beneficiaries, 1,712,000 (or 54 percent) were female. The target of 1,300,000 female beneficiaries or 52 percent was exceeded.
- 257,000 piped household water connections benefitted from the rehabilitated works (baseline 0, target of 161,000 households exceeded)
- 889,000 people in urban areas were provided 24/7 access to water and wastewater (baseline 0, target of 563,500 people was exceeded)
- The quality of delivery of communal services improved evident in the reduced rate of system breakdowns provided by the following indicators:
 - 3.2 km of breaks per year in hot and cold water supply (baseline for water of 30.4 km of breaks per year, target of 6.10 km of breaks per year was exceeded)
 - 0.9 km of breaks per year in wastewater disposal (baseline for wastewater of 19.2 km of breaks per year, target of 3.8 km of breaks per year was exceeded)
 - 0 km of breaks in district heating per year (baseline for heating systems at 10.5 km of breaks per year and target of 2.1 km of breaks per year was exceeded).
- Professional companies managed 90 percent of multi-family buildings (baseline 15 percent, target of 90 percent was achieved). Russian legislation defined professional management companies to include private management companies, House (Home) Owner Associations, and cooperatives. The M&E consultant calculated that 98 percent of apartment buildings in the participating cities were managed and maintained by private companies while the rest of Russia averaged 87 percent (ICR, footnote 11). Previously, all were managed by municipal public services. The private sector entry led to competition, enhanced transparency, and accountability to residents. Their entry also led to better services evident in the 80 percent of citizens who expressed their satisfaction with the quality of services provided by the housing management companies. The rest of Russia averaged 49 percent satisfaction rating, according to by the All-Russian Public Opinion Research Center (VCIOM) (ICR, paragraph 35).
- 80 percent of the population surveyed rated services as satisfactory or better to indicate Improved quality of services (baseline 10 percent, target of 80 percent was achieved).
- 100 percent of participating cities were connected to the integrated HCS information system (baseline 0, target of 30 percent was exceeded).
- Biological treatment system failure rate measured as 0.20 number of failures per year at Ivanovo Waste Water Treatment Plant (2017 baseline was 3.70, target of 0.20 was achieved)
- 0 accidents at Naberzhnye Chelney main sewer measured by 0 number of sewer pipe bursts per km per year reduced (with a 2017 baseline of 0.06 and target of 0 was achieved).
- Ivanovo and Naberzhnye Chelney treatment plant removed 284.6 tones/yr of volume (mass) of Biological Oxygen Demand (BOD) pollution load (baseline 0 in 2012, target of 44.30 tones/yr was exceeded).



- The quality of treated wastewater at the district treatment facilities in Naberzhnye Chelney and Ivanovo cities were improved considerably as outlined in the ICR.

Other outcomes reported but not monitored or part of the results framework or the TOC and did not include targets:

- Water infrastructure investments reduced non-revenue water (NRW) and reduced need for pumping, leading to consuming less energy (ICR, paragraph 56 and Annex 4, paragraphs 13 and 15). The Tula water subproject was to ensure 24/7 supply of high-quality drinking water from the Nepreikovsky and Osky water intake to serve 23,500 residents of Skuratovsky and Mendelevsky districts. Additional demand from 2,800 non-residential users were met by reducing NRW. The Task Team added that all participating cities conducted annual surveys using the World Bank-managed benchmarking program (www.ib-net.org) and covered the period 2010-2020. NRW was one of those 90 parameters surveyed (5 of physical losses per km and per connection. IB-NET also helped track performance improvements such as coverage, cost receiver, accounts receivables, revenue collections, asset values, among others.
- The wastewater investments led to climate change benefits associated with reduced methane emission, which came from upgrade of the wastewater processes with aeration, sludge digestion, and utilization of biogas.
 - The Ivanovo wastewater subprojects estimated the reduction to be 30,000 tCO₂e. The energy efficiency improvements were to reduce the coal demand for district heating, bringing up water operation efficiency with reduced overall CO₂ emissions.
 - In Bratsk, reduced demand for fuels resulted in an estimated reduction of Green House Gas (GHG) emission by 10,000 tCO₂e/yr and associated penalties.
- The installation of domestic heating points and automated centralized system of metering for monitoring and control of heat and hot-water consumption in apartment buildings
 - improved the quality of heat-supply services, by reducing the coping costs to US\$5.6 million per year. Coping cost of the residents referred to the cost of switching from bottled water to cheaper and clean potable 24/7 water supply, improved living conditions, and health benefits due to in-house water and wastewater connections and plumbing (ICR, paragraph 42).
 - achieved energy savings by reducing the cost of coal to 43,600 tons per year (baseline according to the Task Team was 610,003 tons/year and reduced to 574,536 tons/year), The reduced demand for fuels resulted in 10,000 tCO₂e/yr and associated penalties in reduced GHG emission (ICR, paragraph 56). The Task Team added that the baseline for GHG was 1,476,207 tCO₂e/year that was reduced to 1,370,695 tCO₂e/year.
 - decreased the housing and communal payments leading to savings for poorer segments of the population. The reduced payments led to cost savings that ranged from RUB84.5 million in 2018 to RUB100 million in 2019, to RUB137 million in 2020.
- The citizen engagement practices fostered eagerness of the residents to become part of the reform. The round-table discussions, workshops, consultations and data provided through the web portals informed the residents of participating cities, and provided the municipal authorities, utilities, and residents with methodological and knowledge products. The informed citizens enhanced the collective social responsibility aspects and regular feedback mechanism. For example, in Naberzhnye Chelney the application of advanced methods and approaches in the utility company's management, trainings in energy efficient technologies conducted for the residents, an optimized consumption of resources, and accountable management of apartment buildings was achieved.



Overall, the efficacy of the project to achieve this objective is rated Substantial. The outcomes showed targets were achieved for improving the quality of the housing and communal services (HCS) of the participating cities.

Rating

Substantial

OBJECTIVE 2

Objective

To improve the financial viability of the HCS of the participating cities.

Rationale

Theory of Change: The project was to improve HCS financial viability by supporting the implementation of HCS reforms in the participating cities. The focus of the HCS financial viability reforms was to reduce cost, achieve efficient energy consumption, reduce dependency on external funding, and improve willingness to pay for increased quality of services. This TOC provided a logical causal link between inputs, outputs, and outcomes.

Inputs were training and TA directed at officials at both the municipal and federal levels to better understand the importance of HCS sustainability reflected in the tariff and investment decisions of these local officials. These inputs were to reasonably lead to the outputs specified below.

Outputs were to include the number of municipal officials trained in tariff setting and optimal investment decision making, including the number of training events for representatives of city administrations, housing and communal enterprises, and homeowners. Other outputs were to include the reduced amount of payable arrears and cash payments that were to be transferred to individual citizen social accounts. These outputs were to lead to the outcomes below.

Outcomes were to be reduced operating costs, more efficient energy consumption, reduced dependency on external funding, and improved willingness to pay for services. These outcomes were expressed as the elimination of social payment arrears, municipalities monetizing housing allowances, private companies managing communal sector facilities, private investments used to upgrade the communal infrastructure, and reduced operation losses incurred.

OUTPUTS:

- The HCS entities had a 2.4RUB billions of payable arrears at closing (baseline 297.7RUB billion in 2008, target of 25RUB billion was exceeded)
- 14 cities (the target 10 and the backup 4 was exceeded) implemented at least 80 percent of their HCS reform programs, achieving the target.
- nearly 400 oral and written consultations to representatives of more than 200 organizations
- 83 training events for representatives of city administrations, housing and communal enterprises, and homeowners



- In Naberezhnye Chelny, application of advanced methods and approaches in the utility company's management, and specific trainings in energy efficient technologies were conducted for the residents, achieving an optimized consumption of resources and accountable management of apartment buildings (ICR, paragraph 63).
- Cash payments were transferred to individual social accounts of citizens in 14 municipalities (baseline 0, and the target of 14 municipalities was achieved).

OUTCOMES:

- All participating cities fully eliminated their social payment arrears (baseline 20 percent, the target of 0 percent was achieved)
- All 14 municipalities (or 100 percent of target) completed the monetization of housing allowances (the baseline was 0 and the target of 14 municipalities was achieved).
- 81 percent of private companies managed communal sector facilities based on concession and other agreements (baseline was 18 percent, the target of 65 percent was exceeded)
- Private investments provided 97.4 percent of the total investments to upgrade the HCS infrastructure (baseline 26 percent, the target of 70 percent was exceeded)
- 27 percent of the HCS entities incurred operational losses (baseline 60 percent, target of 10 percent not achieved). Target was not achieved. Utilities could not set cost-recoverable tariffs as tariffs were restricted by legislation. Annual increase of tariffs was limited. The 27 percent (five of eleven entities operated with losses, based on weighted average of population served), was significant and was far below the average of 59 percent in comparable cities with the same population size (90,000 to 600,000). The ICR reported that 80 percent of more than 3,000 water supply and sewerage enterprises (vodokanals) were not profitable since the 2014 financial crisis (ICR, paragraph 46 and footnote 20).
- Operation and maintenance (O&M) cost requirements of communal infrastructure was reduced to 44 percent at closing (baseline of 66 percent, target of reducing O&M costs to 45 percent was achieved).
- Key parameters of the water and sanitation utilities in the ten participating cities benefited from both the implementation of reforms and investments to the communal infrastructure (ICR, paragraph 4 and Table 4):
 - Water services coverage increased ranging from 79 to 100 percent to 80 to 100 percent.
 - Sewerage services coverage increased ranging from 78 to 100 percent to 80 to 100 percent.
 - Close to universal metering provided evidence of reduced residential water consumption (from 220 liters per capita a day (lpcd) in 2009 to 130 lpcd in 2020). This universal metering also led to a decrease in water consumption, in associated billings, and in revenues received by utilities. Tariff increases could not fully compensate the reduced billing and revenues, as neither regional, municipal authorities, or the utilities could set tariffs higher than the limits established by the federal government. This was especially acute after the 2014 financial crisis and the national currency devaluation. While tariffs were growing at the rate of 4-5 percent a year, their US\$ value did not increase and even decreased
 - Cost recovery ratio of water and wastewater utilities improved from 0.99 in 2009 to 0.84 in 2020
 - Collection rate of water and wastewater utilities reached 100 percent (except for Orenburg) as a result of improved billing and financial management.
 - COVID19 restrictions increased accounts receivable in six of 10 cities. The COVID19 pandemic reduced income because of mobility restrictions, other limitation measures, and quarantines. Businesses were suspended, reduced, or temporarily or permanently closed. The



average account receivable for utilities increased on average from 90 to 120 days, reaching a high of 272 days in Saransk, and 180 days in Orenburg. Overall, the account receivable rate grew due to the prohibition of disconnection or services restrictions in 2020-2021.

Outcome outcomes that were not monitored, not part of the TOC or the results framework, and without targets, included:

- The current practice of HCS budget management changed the residents' perception about the sector. Greater awareness and ownership fostered the multi-household buildings management by residents, and increased competitiveness in the housing service market. The Task Team added that surveys financed by the project showed that citizens' satisfaction with the work of multi-family building management companies increased from 26 percent at the project start to 60 percent at closing.
- The competitive selection of cities was accompanied by relevant TA support, new allocation method of funds from the central to municipal levels was developed and piloted to use federal funds for municipally-owned infrastructure; onsite monitoring of the construction cycle; development of the "Best Practice of Investment Projects and Institutional Reforms in the Cities Participating in the HCSP" that has been widely disseminated.
- The project strengthened the capacity of the St. Petersburg Foundation of Investment Projects (FISP) Project Implementation Unit (PIU) to perform PIU functions for the investment lending operations in Russia and Russian cities financed by other international financial institutions. The FISP is the PIU for the New Development Bank (NDB) - financed project, "Development of Water Supply and Sanitation Systems in the Cities of the Russian Federation," currently under implementation.
- Private sector financing was mobilized. Some cities included affordable housing as part of their investments. In Tula, the project responded to additional demand, bore the added work, upgraded dilapidated residential stock, and developed new high-rise residential districts (named Severnoe Zarechye and Krasnie Vorota).
- The 2019 restructuring led to a TA on developing a national Information and Analysis System for Management of Investment and Construction Projects (IAS MICP) to help MOCHCS track the implementation of Federal State Program-financed investment and construction projects. This IAS automated the process of planning, collecting, and monitoring data on federal funded investment projects under different government programs, and provide on-line information on projects' progress. The Ministry tested the system in 2021 and is operational in 2022.

Overall, the efficacy of the project to achieve this objective is rated Substantial. Parameters of financial viability of the HCS in participating cities improved except for the target regarding the reduction of the number of days for accounts receivable due to the impact of COVID19 restrictions.

Rating
Substantial

OVERALL EFFICACY

Rationale



The efficacy of the project to achieve both objectives 1 and 2 is rated Substantial because investments were substantially completed after the adoption of HCS policy reforms and financial viability improved. The overall efficacy of the project to achieve its objectives is rated Substantial. Both the quality of HCS delivery and financial viability of the HCS in the participating cities improved .

Overall Efficacy Rating

Substantial

5. Efficiency

Economic and Financial Efficiencies: At **appraisal**, no financial and economic analysis was conducted because participating cities were to be selected at implementation, HCS reforms implemented before financing eligible subproject investments. The project mandated the methodology for assessing economic and financial analyses of each subproject at implementation. Each subproject would meet a minimum 15 percent economic internal rate of return (EIRR) and a minimum 12 percent financial internal rate of return (FIRR, PAD, paragraph 40 and Annex 9). Each EIRR was expected to be underestimated because of difficulties in quantifying some of the benefits. The FIRRs were to be classified into two - those that lead to reduced O&M costs of providers, and those that improve the financial efficiency of providers.

A **cost benefit analysis** was to be undertaken for the HCS investments using the "with" and "without" project scenarios. Benefits and costs were to be calculated exclusive of taxes and subsidies. **Benefits** were to include service quality improvements, improved service continuity,, increase in coverage, improved efficiency, and reduced O&M costs; decrease in disease incidence due to poor HCS, environmental benefits, and increase in the value of housing. **Costs** were to include investment and O&M costs.

At **closing**, 31 sub-projects were implemented in the 10 participant cities at US\$292.4 million. Subprojects were categorized into three: (i) 60 percent in wastewater management and treatment; (ii) 33 percent in water services and networks; and (iii) seven percent in energy efficient district heating. All contracts were pre-screened for financial, technical viability, and affordability from the perspectives of both service providers and residents. Using a 12 percent discount rate on a sample from each category – water in Tula, energy in Bratsk, and wastewater in Ivanovo - the investments (about 41 percent of the overall program) were found to be economically viable, environmentally, and financially sustainable.

The ERRs ranged from 41 percent for the energy efficient sub-projects in Bratsk, 14 percent for the water subprojects in Tula, and 13 percent for the wastewater collection and treatment in Ivanovo. All the investments were grants with little impact on financial performance of the investments, except some growth in revenues (ICR, Annex 4).

The economic and financial efficiency rates at closing could not be compared to those at appraisal because no analysis was undertaken at appraisal. The economic and financial efficiencies of each subproject followed the mandated methodology.

Administrative and Operational Efficiency: The World Bank Board approved the project in February 2008 with a loan closing date of November 30, 2012. The government was reorganized in autumn 2008, and again in



2013 - 2014. The implementing agency went from Rosstroj to MORD to the Ministry of Construction and Housing and Communal Services (MOCHCS) in November 2015 (ICR, paragraph 25). The LA and an exchange of official letters confirmed an original closing date of June 1, 2014 (ICR, paragraph 24). Five restructurings (see Dates above) extended the loan closing date by 90 months (i.e., 7.5 years). This extension reflected a significant drawback in the operational efficiency of the project. Three factors affected operational effectiveness. First, the 2013-2014 government reorganization meant no entity was authorized to enter into contracts or pay contractors, delaying procurement and disbursements (see Section 10 Other Issues below). Second, the government increased its co-financing to add investments in two more cities of Ivanovo and Naberzhnye Chelney.. Third, the impact of lockdown measures and logistic disruptions from COVID19 restrictions. These are all indications of relatively inefficient administrative and operational efficiency.

Overall, the economic efficiency achieved by the project provided sufficient evidence to overcome the operational inefficiencies brought about by the impact from the unforeseen 2008, 2013, and 2014 government reorganizations and the 2020 COVID19 pandemic. Efficiency is rated Substantial, notwithstanding the 90 month extension of project implementation.

Efficiency Rating

Substantial

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal		0	0 <input type="checkbox"/> Not Applicable
ICR Estimate		0	0 <input type="checkbox"/> Not Applicable

* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome

The relevance of objective is rated Substantial. The efficacy of the project to achieve the first objective is rated Substantial. The efficacy of the project to achieve the second objective is rated Substantial. The overall efficacy of the project to achieve its objective is rated Substantial because the participating cities adopted HCS reform, implemented the HCS infrastructure investments accordance with these reforms, and achieved improvements in the financial viability of the HCS sector. Efficiency is rated Substantial because the economic and financial efficiencies overcame the operational inefficiency reflected in the 90 month extension of the project implementation period. The overall outcome of the project is Satisfactory.



a. **Outcome Rating**
Satisfactory

7. Risk to Development Outcome

The following pose risk to the development outcomes:

- **Political risk.** The ongoing war in the region is a high risk to the outcomes achieved by the project. Sanctions have been imposed on Russia with an impact that is likely to remain for some time. In this project, new partnerships and HCS investments evolved. Lessons in conforming to international practice and standards accepted by the International Financial Institutions (IFIs) led to comprehensive urban development and socioeconomic plans for built-up areas in small and medium-sized Russian towns. The interest from IFIs to support this sector is likely to be hampered by the current war.
- **Macroeconomic risk:** The same war noted above in the political risk also pose a considerable macroeconomic risk. The disruption in economic activities, both in the region and globally, such as trade and the generation, transmission, and distribution, of energy will likely remain for some time.
- **Institutional capacity risk.** In this project, HCS sector reforms were adopted and implemented at the federal and local government levels. These reforms improved the legal and regulatory framework of the HCS service delivery, supported efficient investments and led to disseminating good practices. The local governments did not provide documentation to indicate that institutional reforms introduced by the project would be supported by adequate resources. However, the ICR reported that the federal and municipal authorities were planning to enforce normative acts to maintain and optimize the results achieved at the policy and management levels (ICR, paragraph 105). The Task Team also reported that the government approved a strategic roadmap on October 1, 2022 to support HCS 2030-2035 using the documents and experience of this project.
- **Technical and financial risks:** In this project, the completed HCS investments require O&M resources. The MOCHCS is using a national level Information and Analysis System for Management of Investment and Construction Projects (IAS MICP) to track the implementation of federally funded investment and construction projects (ICR, paragraph 66 and footnote 23). The HCS website and the MOCHCS system require periodic technical updates. All participant cities were reported to have allocated O&M budgets for the completed infrastructure. Both public and private funds are expected to support continued improvement of the HCS in the cities. Given the ongoing war in the region, the COVID19 pandemic, and federal level tariff structure limitations, debt recoverable tariffs may not be achieved. Subsidies may be required to cover the O&M costs and losses of the HCS service enterprises.

8. Assessment of Bank Performance

a. **Quality-at-Entry**



The Bank team designed this project recognizing the relevance of its objectives to the country plans and the Bank's strategy for the country. The Bank team provided adequate inputs and processes in designing the use of TA to spur HCS reforms and allocating investment financing to implement these. Lessons learned from prior projects in the sector informed project design. These included the use of the investment lending instrument with policy orientation, a flexible design to respond to evolving demands, performance based allocation of resources, social protection features to broaden the target beneficiaries, a single federal agency to implement the project, and government ownership evident in an Inter-Agency Working Group formed by the Ministries of Finance, Regional Development, and Economic Development and Trade.

The Bank team adequately assessed the technical, financial, environmental and social safeguards aspects of the project. Specific investments were to be identified during implementation and mechanisms were designed to ensure that investments complied with Bank policies and processes. The team mitigated the substantial implementation risks brought about by frequent government reorganizations by setting up an Inter-Agency Working Group and selecting a single federal agency to implement the project, the Federal Agency for Construction, Housing, and Communal Services (Rosstroi). Unfortunately, the project did experience two government reorganizations in its implementation period. The first, in 2008, dissolved and replaced Rosstroi with the Ministry of Regional Development of the Russian Federation (MORD). Then, following the 2013 -2014 reorganizations, the Ministry of Construction and Housing and Communal Services (MOCHCS) replaced MORD (see Supervision below). The Bank team designed M&E around monitoring of outcomes of the indicators noted in the results framework (PAD, Annex 3). Twice a year, formal reviews of results and targeted household surveys were to be conducted to evaluate the quality-of-service improvements. Agreements between local authorities and the federal government were to stipulate the M&E support from local governments (see Section 9, M&E Design below). The government increased its original co-financing commitment to implement additional investment activities to enhance project outcome.

Overall, the Bank performance at entry is rated Satisfactory.

Quality-at-Entry Rating Satisfactory

b. Quality of supervision

The Bank team conducted 27 supervision missions, supported by Moscow-based staff over the 13-year implementation period, including virtual missions during the pandemic. Technical and sectoral experts were enjoined to facilitate compliance with applicable Bank policies and following sound international practices. Local consultants assisted in delivering trainings and workshops and in monitoring the HCS reforms. Adequate supervision inputs and processes led to extending project closing end dates, contributed to M&E implementation, and provided technical solutions to complex infrastructure related subprojects (see Section 10 Other Issues Procurement below). The Bank team's support to the FISP PIU strengthened its capacity and led to their designation to implement the ongoing US\$320 million loan from the New Development Bank (NDB) financing the "Development of Water Supply and Sanitation Systems in the Cities of the Russian Federation." The 2017 extension also increased the government's co-financing commitment (from US\$6 to US\$132 million) that facilitated additional outcomes such as the government's



October 1, 2022 strategic 2030-2035 roadmap to support housing and communal services based on the project's experience.

Overall, the quality of Bank performance at supervision is rated Satisfactory.

With the Bank performance at entry rated Satisfactory and at supervision also rated Satisfactory, the overall Bank performance is rated Satisfactory.

Quality of Supervision Rating

Satisfactory

Overall Bank Performance Rating

Satisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design

The theory of change was sound, embodied in the results framework to link key activities and outputs to the outcomes. The objectives were clearly stated and specified the market reform needs of the HCS sector in the target participant cities. The indicators encompassed all outcomes of the PDOs. Indicators were added at implementation to address the increase in co-financing resources (see Implementation below). The intermediate results indicators adequately captured the contribution of the activities and the outputs to achieve the outcomes. Other outcomes supplemented this shortcoming. These included outcomes of added surveys with respect to satisfaction with management performance, the monitoring of the improvements in NRW, and impact on GHG emissions, and coal use. The indicators were specific, measurable, achievable, relevant, and time-bound. Baselines and targets were available for indicators at project start. Indicators were added to capture additional investments during restructuring for a more accurate picture of outcomes (see Implementation below).

b. M&E Implementation

MOCHCS implemented the M&E system as designed supported by the St. Petersburg Foundation of Investment Projects (FISP) as its Project Implementation Unit (PIU). The government rebid the PIU contract before the LA was approved and reassigned the PIU function to FISP in place of the Enterprise Restructuring and Financial Institutions Development (FER, ICR, paragraph 76). M&E design was well-embedded institutionally. The PIU reported to the federal level implementing agency and was supported by the participating local governments. Participating cities contributed to the regular M&E reports. The FISP PIU ensured effective M&E implementation by recruiting several experts and organizations to contribute to M&E implementation and provide independent, reliable, and good quality data. These included the Institute of Urban Economics (SEURECA), Institute of Economics of Housing and Communal Services, and the Center for Analysis of Real Estate Markets.



The indicators included in the results framework were measured and reported. In addition to monitoring the city level interventions, the PIU collected the following additional information from each participant city: (i) continued implementation of the HCS reform agenda after the reform phase; and (ii) disaggregated data by HCS subsectors - water supply, wastewater, heating, solid waste, and energy. Added output indicators after restructuring monitored and reported on the environmental impact from the two added investment subprojects in Naberzhnye Chelney and Ivanovo Independent engineering supervision consultants assisted in supervision and monitoring. A TA to develop a national level information-analytical system helped the MOCHCS track the implementation of investment and construction projects financed from the federal funds across the country. This enhanced the monitoring capacity of the authorities and its implementation likely to continue after the project closed.

c. M&E Utilization

M&E data was used by management to inform project progress, the Mid Term Review and the 6 restructurings. Intermediate indicators were added at restructuring to better capture the contributions of the added investments to the project outcomes. M&E findings were communicated to the various stakeholders. Participation enhanced the reform agenda. Stakeholders included the residents, the HCS enterprises, buildings' councils, and private providers who used M&E data to develop and foster competition in the market for multi-family buildings' management services (ICR, paragraph 83). Restructuring acknowledged the formal shifts in implementation with the added co-financing from the government. M&E data, particularly those used in producing city level ICRs at closing, provided evidence of achievement of outcomes. M&E data and findings were expected to inform future similar interventions in the sector (see Section 12 Lessons below).

Overall, the design, implementation, and utilization of M&E is rated Substantial. The M&E system was well designed. The implemented M&E system was enhanced by the participation of independent experts. M&E data was used to strengthen the results framework to test the links of the results chain. The monitoring system was adopted as part of a federal M&E system to report on the federal use of funds for municipal investments.

M&E Quality Rating

Substantial

10. Other Issues

a. Safeguards

Environmental Safeguards: The project was categorized as Category "B" and triggered Environmental Assessment (OP/BP 4.01). Implementation performance was rated Satisfactory (ICR paragraph 89). The lack of specific investment at appraisal stage led to an Environmental Management Plan (EMP) with a "green" and "red" list of investments. The "green" listed investments that were compliant with Category B. The "red" listed investments that would require an Environmental Assessment and were not recommended for inclusion in the project. The project complied with all applicable safeguard policies with no material environmental issues (ICR, paragraph 90). Minor effects on the environment caused by construction works such as dust, noise, or temporary traffic disruptions were mitigated by implementing the EMP. This meant



that each contract stipulated sound practices. The project activities complied with the Environmental and Social Management Plans (ESMPs). No Occupational Health and Safety (OHS) non-compliance cases were registered. Monitoring of COVID19 mitigation measures was implemented.

Social Safeguards: No activities necessitated involuntary resettlement and/or land-acquisition because all the works were within existing utility facilities, or in the existing right of way, and “restricted access” zones were solely municipal property. No Resettlement Policy Framework (RPF) was required but a draft was prepared and included in the Project Operations Manual (POM). No formal Grievance Redress Mechanism (GRM) was required but the POM included a framework for handling of complaints. Both the national and subnational governments maintained mechanisms to allow citizens to bring complaints to the attention of the authorities (ICR, paragraph 51). Fewer complaints in water and wastewater system interruptions were lodged as citizens benefited from uninterrupted 24/7 water and wastewater supply (see Section 4 Efficacy above). Additional environmental outcomes were reported including: (i) improved indices in water and wastewater treatment; (b) energy savings and indirect measures of emissions reduction; and (iii) reduced accidents, spillages due to improved sewage collection and wastewater treatment networks (ICR, paragraph 91).

b. Fiduciary Compliance

Financial Management: The FISP PIU had staff with appropriate skills to comply with Bank financial management policies such as accounting, internal control, and report monitoring aspects. The Bank found quarterly monitoring and annual audit reports acceptable. No significant issues or any audit qualifications were raised. A World Bank Financial Management Specialist reviewed accounting and reporting arrangements, organization and staffing, internal control procedures, planning and budgeting, counterpart funding, funds flow and disbursement, and external audits during supervision missions. An external audit was undertaken to account for the continued proper use of project financed assets at the municipal level.

Procurement: The project complied with the Bank procurement policies, noted as Satisfactory throughout implementation (ICR, paragraph 95). In the second of two government reorganizations that affected implementation, the 2013-2014 one delayed procurement directly because no one was authorized to sign contracts during the transition from MORD to MOCHCS as the project implementing agency. Consultants supported the cities in preparing bidding documents. The government and the Bank agreed on a specialized format of the investment contract. The communal infrastructure was municipal property. The loan proceeds to modernize the communal infrastructure were federal resources. This was the first time Russia was to use federal funds for municipal investments. A different standardized contract was developed to acknowledge Bank-financed operations and both the line federal Ministry and the participant city represented in the standardized contract. Government approval took longer than expected and delayed the initial procurement process (ICR, paragraph 61). No cases of misprocurement were reported. Post procurement reviews did not identify any violations. Some season-related construction costs were reported but these were subsequently resolved (see Section 12 Lessons below).

c. Unintended impacts (Positive or Negative)



d. Other

11. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Satisfactory	Satisfactory	
Bank Performance	Satisfactory	Satisfactory	
Quality of M&E	Substantial	Substantial	
Quality of ICR	---	Substantial	

12. Lessons

The project operations identified six lessons (ICR, paragraphs 106-111). Five are presented below with slight modifications.

- **A holistic approach to modernizing the HCS networks (water supply and treatment, sanitation, district heating) may serve the sector better.** In this project, HCS sector reforms were initiated at both the federal and local government levels. Once municipalities implemented HCS reforms, they accessed financing to modernize its HCS infrastructure. This approach showed how a multi-sectoral collaboration worked. In addition, the approach led to positive impacts in climate, private capital mobilization, and citizen engagement. For example, in the cities of Tula, Bratsk, and Cheboksary, the sanitation system, cold and hot water network, and district heating systems were simultaneously rehabilitated and modernized. These activities improved service delivery and reduced the cost of providing communal services. This approach yielded greater impact as survey respondents expressed satisfaction with the project activities.
- **Disseminating legal documents and best practices in HCS reforms may lead to more reforms.** In this project, HCS sector reforms opened markets to the private sector. The private sector participated in formulating market reforms that led to reduced public costs of such services. City authorities, following best practices, eliminated public arrears to HSC providers by replacing inefficient HCS providers. Using streamlined legal and regulatory sector framework, they also effectively met their financial obligations.
- **Innovative approaches may apply to the HCS sector operations elsewhere in the region.** In this project, the performance-based criteria of first, implementing sector reforms, to enable municipalities to access the financing of communal infrastructure investments funds, proved viable. The Bank may then use this approach in future HCS sector lending operations elsewhere. The approach allowed the combination of performance incentives to focus on the reform agenda to modernize communal infrastructure.
- **A project manager and a local working group in each participant city may benefit implementation.** In this project, implementation arrangements covered a wide territory and covered multi-sectors. Implementation covered TA support for feasibility studies and detailed



engineering designs, and also monitoring and supervision of civil works. Implementation was assisted by having a project manager and local working group oversee these complex operations. Consistency across the wide territory was facilitated by standardized documentation, and making best practices and legal documents available to all stakeholders online. These implementation arrangements fostered accountability and ownership of the built assets by the local authorities contributing to improving financial viability of the HCS sector in these cities (see Section 4 Efficacy above).

- **Seasonal construction may affect implementation.** In this project, a framework approach was used for its design. This meant that specific investments were to be identified during implementation. The seasons affect the pace of construction in this part of the world. Thus, civil work planning needs need to factor in reasonable reserve to consider the impact of the seasons.

13. Assessment Recommended?

No

14. Comments on Quality of ICR

The ICR was internally consistent, followed the guidelines, and provided a comprehensive story of the project operations. Parts of the report were logically linked and the results reinforced throughout. The quality of evidence was good, citing sources outside of the government from independent reputable organizations that supported the implementation of the M&E system. The annexes provided additional information to outline the impact of the reorganizations and restructurings (Annex 5) and details to support the outcomes achieved at the city level (Annex 6). Annex 4 on project efficiency also strengthened the argument for overcoming the operational inefficiencies reflected in the 90-month extension of the project closing date. There was sufficient interrogation of the evidence clearly linking the evidence to the findings. Lessons were based on the project experience, particularly with regard to the holistic approach to address deteriorating investment needs with first adopting the underlying sector reforms. The report was results oriented, highlighting the causal relations between the project activities, that led to outputs and outcomes. Particularly helpful too was the section discussing other impacts of the project activities. A minor shortcoming was exceeding the suggested number of pages (30 against the suggested 15). The only real risk to the project development outcome is the war in the region that started after this ICR was completed.

a. Quality of ICR Rating

Substantial

