



1. Project Data

**Project ID**  
P165651

**Project Name**  
Sustainable Energy Scale-Up

**Country**  
Belarus

**Practice Area(Lead)**  
Energy & Extractives

**L/C/TF Number(s)**  
IBRD-90140,TF-B4559

**Closing Date (Original)**  
30-Apr-2025

**Total Project Cost (USD)**  
15,327,200.50

**Bank Approval Date**  
30-Oct-2019

**Closing Date (Actual)**  
30-Apr-2025

	IBRD/IDA (USD)	Grants (USD)
Original Commitment	102,953,000.00	3,653,000.00
Revised Commitment	18,806,567.68	3,653,000.00
Actual	15,327,200.50	55,000.00

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**Project ID**  
P170996

**Project Name**  
Sustainable Energy Scale-Up ( P170996 )

**L/C/TF Number(s)**

**Closing Date (Original)**

**Total Project Cost (USD)**  
0

**Bank Approval Date**

**Closing Date (Actual)**



30-Oct-2019

	IBRD/IDA (USD)	Grants (USD)
Original Commitment	0.00	0.00
Revised Commitment	0.00	0.00
Actual	0.00	0.00

## 2. Project Objectives and Components

### a. Objectives

The project's development objective, as cited on p.5, Schedule 1, of the Loan Agreement, as well as on p.1 of the PAD, was "scale up efficient energy use in space heating of multi-apartment buildings and renewable wood biomass utilization for heating in selected localities in Belarus".

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

No

### c. Will a split evaluation be undertaken?

No

### d. Components

**Component 1:** Renewable Wood Biomass Heating (**Estimated cost at appraisal:** US\$134.7 million, of which half was to come from EIB. EIB dropped out and the project was suspended, and **Actual cost at closing was:** US\$15.27 million). The component was to finance: (a) the conversion of the inefficient local and municipal gas-fired district heating (DH) plants of the Ministry of Housing and Utilities (MOHU) into woodchip-fired boilers, (b) installation of new peak gas-fired boilers, (c) modernization of DH networks, (d) installation of individual heat substations and operational monitoring and control systems, and (e) development of local sites for wood fuel preparation. The component would also finance the installation of distributed biomass heating units, within or near multi-apartment buildings (MABs).

**Component 2:** Thermal Renovation of Multiapartment Buildings (**Estimated cost as appraisal:** US\$60.95 million, or EUR 27.15 million, with EIB contributing an additional EUR 27.15 million, and GEF providing grant financing of EUR 0.906 million; **Actual cost at closing:** US\$ Nil, on account of the project's suspension). The component was to refinance the full cost of thermal renovation projects in MABs in two oblasts selected by the Government and the World Bank on a pilot basis. Two renovation packages would be offered to target the lower and higher ends of the potential energy savings respectively, prioritizing measures with higher cost-effectiveness: (a) Package A: designed to yield 1-15 percent heat energy savings – including building-level substations or mixing loops, thermostatic radiator valves (TRVs) and necessary piping retrofits in individual apartments, upgrading of entrance doors and staircase windows, and



other low-cost measures; (b) Package B: designed to enable savings of 40 percent or more heat energy savings – including (in addition to Package A measures) thermal insulation of the roof, exterior walls, basement and upgrading of individual apartment windows (at homeowners' own cost).

Both packages would include installation of heat cost allocators (HCAs) and implementation of apartment-level consumption-based billing as an option for homeowners, since apartment heat billing was not a mandatory (regulatory) requirement. One residential settlement was to be cofinanced with US\$1 million out of the GEF grant. IBRD and EIB funds were to be disbursed as partially repayable grants, of which the homeowners of selected MABs would be obliged to repay a predetermined portion in instalments over a 15-year period.

**Component 3:** Technical Assistance and Implementation Support (**Estimated cost at appraisal:** US\$6.74 million, with EUR 1.85 million coming from each of IBRD and EIB, and EUR 2.402 million of proposed GEF grant financing; **Actual cost at closing:** US\$0.06 million, on account of the project's suspension). The aim of the component was to provide technical assistance (TA) to the thermal renovation pilot and program, as well as for overall project implementation support, including for market development for biomass fuel and thermal renovation, development and introduction of a monitoring, reporting & verification (MRV) system, which would include a grievance redress mechanism.

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

##### Project Cost and Financing

Of the initial US\$ 202.39 million cost of the project, IBRD financing amounted to EUR 90 million (US\$99.3 million equivalent), with an equivalent EUR 90 million to come from the EIB. An additional US\$3.653 million grant financing was to come from the GEF Trust Fund. The project was suspended on March 19, 2022, when the World Bank suspended its Belarus country work program in view of the deteriorating operational environment, resulting from the cumulative impact of restrictions and sanctions. Undisbursed amounts under the loan were canceled at the request of the Government. Actual costs at project closing (suspension) amounted to US\$15.33 million, which included US\$55,000 from the GEF Trust Fund. EIB financing for the project did not in fact materialize, as EIB informed the Bank in August-September 2020 that it would not participate in the project.

##### Borrower contribution

No Borrower contribution was envisaged as part of the project's financing, nor was any provided.

##### Dates

The project was approved on October 30, 2019, becoming effective on August 13, 2020. As indicated above, the project closed early on March 19, 2022, on account of the suspension by the World Bank of the country work program in Belarus.

### **3. Relevance of Objectives**



## Rationale

### Country and Sector Context

By 2017, Belarus consumed about 25.79 million tons (toe) of primary energy, while being highly dependent upon cheap energy imports from a single source. Though the country made significant progress in reducing the energy intensity of its economy by over 50 percent over the period 2000-2015, by the end of this period 80 percent of primary energy consumption was being imported from the Russian Federation, with about 95 percent of power and 80 percent of heat being produced from natural gas. Some 70 percent of residential energy was used for space and service water heating, provided mainly via district heating (DH) systems. Utilization of space heating was highly inefficient, for two reasons: first, the majority of the population lived in multi-apartment buildings (MABs), which had poor thermal insulation, and second, the residential tariff was heavily subsidized, thereby discouraging energy conservation and energy efficiency (EE) investments. Although some tariff reforms had been initiated, heat tariffs – at the time of appraisal – remained at only 22 percent of cost for DH, with the Government trying to avoid rapid increases in view of negative social impacts. The focus was instead on trying to achieve some cost reduction through increased efficiency and import substitution; in part by increasing the share of local fuels, like biomass, in heat generation.

Forests being Belarus's richest natural resources, the estimated renewable energy potential of wood biomass was about 192.6 TJ/year, against the country's total consumption in 2017 of about 60.2 TJ/year, mainly in the form of commercial firewood. According to a World Bank estimate, at the time of appraisal, the country's fuelwood supply had the potential to increase to about 82.5 TJ/year, adequate to increase the share of biomass in heat generation from its 26 percent baseline in 2015 to 32 percent in 2020, in line with the Government's goal. Prices of local wood biomass at the time were considerably lower than the price of imported natural gas, which could help reduce the cost of energy production in the future. Key challenges to the further development of wood biomass fuel in space heating were (a) diminishing economic returns due to depletion of sites with large heat load and close to sources of wood chip supply, and (b) the inefficient pricing mechanism and underdeveloped supply infrastructure for wood biomass fuels.

### Alignment with Country Strategies

The Project's development objectives were broadly consistent with those of the World Bank Group (WBG)'s Country Partnership Framework (CPF) for Belarus, FY18-22, especially for Focal Area 3 ("Improving contribution of infrastructure to climate change management, economic growth and human development") and Objectives 3A ("Enhanced climate change management") and 3C ("Enhanced efficiency, security and quality of energy utility provision"). It was expected that the project would build on the achievements of two ongoing projects, reducing district heating costs, heating bills and net carbon emissions while improving utilities' energy management. It would support these objectives by promoting energy efficiency (EE) via the use of biomass, aligning with the main focus of the CPF activities on climate change mitigation, through reductions in GHG emissions associated with the EE and domestic biomass programs, supported by scaling up the activities of the World Bank's Biomass District Heating Project (P146194).

EE programs, being a priority for the Government for social and economic reasons as well as for environmental reasons, contributed to the articulation of these priorities in the Program of Socio-Economic Development for 2016-20, to which the CPF was aligned. Belarus was a party to the Climate Change Convention, and its Nationally Determined Contributions Document was prepared as part of the



architecture of the December 2015 UN Paris Climate Agreement, and built on the Belarusian National Program of Measures to Mitigate Climate Change 2013-2030, which the CPF also supported. As such the project was integral to the achievement of these programs and priorities.

Although project activities were terminated early on account of the suspension, the relevance of the project increased, if at all, on account of the deterioration of external conditions, increasing the importance of import substitution and lower-cost biomass fuel for the country. The PDO relating to the scaling up of wood biomass utilization could be considered realistic and aligned with Bank experience and local capacity built through the earlier Biomass District Heating Project.

Based on the above, Relevance is rated Substantial.

## **Rating**

Substantial

## **4. Achievement of Objectives (Efficacy)**

### **OBJECTIVE 1**

#### **Objective**

“To scale up renewable wood biomass utilization for heating in selected localities in Belarus”

#### **Rationale**

##### Theory of Change (TOC)

The project represented an effort to reduce the energy intensity of Belarus by selectively providing support to the demand and supply sides of heating of residential (and some public) buildings in two areas where it was needed most. On the supply side, the project targeted the less-efficient district heating (DH) plants of the MOHU to improve their efficiency and the country’s energy security by enabling substitution of expensive imports and encouraging efficiency improvements. On the demand side, the focus was on improving efficiency of energy use in multi-apartment buildings (MABs) in selected areas on a pilot basis, to assess and develop modalities to scale up this activity in a viable manner.

The results chain presented in the PAD (pgs. 15-16) described the causal links between the project’s activities and planned outcomes. Key activities included replacing obsolete gas-fired boilers, rehabilitating the network and modernizing individual heat substations (IHSs), which would result in a reduction of heat production costs and reliance of imported natural gas, and would increase local heating service efficiency by reducing losses. The pilot activities for thermal renovation in MABs would provide a demonstration of a viable business model for longer-term debt financing and efficient delivery of thermal renovation projects to bring about efficient energy use in space heating in these buildings. These in turn would lead directly to longer-term outcomes in terms of increased number of households supplied with district/centralized space heating



based on renewable wood biomass; improved heating quality of beneficiary households and increased energy security for Belarus, coupled with reduction in greenhouse gas (GHG) emissions.

Indicators used to measure the achievement of objectives were consistent with the above results chain. Achievement of project outcome was measured by indicators relating to projected lifetime fossil fuel savings due to investments financed by the project (in mega joules); projected lifetime avoided CO<sub>2</sub> emissions due to investments financed by the project (metric tons of CO<sub>2</sub>); and rate of households' participation in thermal renovation investments.

### **Outputs**

Considerable initial progress was made in scaling up wood biomass utilization, with the replacement of natural gas with biomass in the form of locally-sourced wood chips in the boiler plants of the MOHU. By December 2021, 35 sites had been selected for the project by MOHU and loan funds were to be allocated to six oblasts, as per presidential edict. By end-2021, 15 sites had tenders issued for these oblasts, 9 of which had contracts awarded (though 4 had to be cancelled due to non-compliance with respect to the technical requirements of the bidding documents. The remaining 19 sites were included in the national EE program for 2021-25. Until the project's suspension brought a halt to the process, the tendering process was – according to the ICR (p.14) – progressing at a prudent pace, with important lessons being applied and learned (reflected in the number of cancellations and re-biddings).

In addition, 44 MW of generation capacity of renewable biomass energy was constructed, against a 2025 target of 225 MW.

As such, though the outcome indicators may have indicated modest progress towards achievement of objectives, actual progress on the ground was not negligible.

### **Outcomes**

In the limited time-period up until the implementation of the project suspension, progress was recorded in the case of two of the three outcome indicators which related to PDO1:

(a) Projected lifetime fossil-fuel savings due to investments financed by the project amounted to 16,141,583,360 MJ (as estimated by the ICR, on annualized basis, Table 2), against a baseline of 0 and a target of 61,000,000,000 MJ.

(b) Projected lifetime CO<sub>2</sub> emissions attributable to the project were of the order of 954,900 metric tons (as estimated by the ICR, on annualized basis, Table 2), against a baseline of 0 and a target of 3,800,000 MT.

Had the project not been suspended in March 2022, early in the implementation period, the progress made might, by close of project, have resulted in achievement of these indicators. However, based on the limited progress made until actual project closing on account of the suspension, achievement of outcomes is rated Modest.

**Rating**  
Modest



## **OBJECTIVE 2**

### **Objective**

“To scale up efficient energy use in space heating of multi-apartment buildings in selected localities in Belarus”

### **Rationale**

The performance of the project in meeting the objective of reducing GHG emissions in the project areas was measured by a single PDO indicator and several intermediate indicators.

### **Outputs**

A certain amount of preparation work had been undertaken towards initiating renovations in space heating in relevant MABs by the time of suspension. It was firstly necessary for a majority of homeowners in the selected group of buildings in Grodno and Mogilev to agree to an initial energy assessment or audit, to determine the scope of the internal thermal renovations needed, their cost and homeowners' repayment obligations. Based on the findings of the assessment, homeowners would need to approve – by a two-thirds majority – the entering into an agreement for the investment and repayment plan, and the technical plan would have to be approved by the designated government agency, Oblast Expertise, before tendering could commence. Also, prior to approaching the homeowners, surveys would need to be conducted and an engagement and outreach strategy developed. Further, PIUs would need to be set up, staffed and trained at oblast and municipality level and the framework and modalities of the strategy be tested on a pilot basis. According to the ICR (p.14), much of this work had already been completed or substantially advanced by the time of project suspension.

As regards the intermediate indicators, an initial 667 homeowners did participate in consultations (target of 60,000 by 2025), of whom 387 were female participants (target of 40,000 by 2025). In addition, terms of reference were prepared for developing a methodology for GHG emission reduction related to thermal renovation and biomass district heating.

All four program activities supporting the thermal renovation pilot were dependent on GEF financing, which was however substantially delayed. Though the GEF co-financing agreement was a condition of effectiveness for the project, the GEF manager was not actually selected until July 2021, and the grant plan was approved only by end-2021. Implementation activities commenced in early 2022, with the suspension taking place in March, of that year. As such, the contribution of the TA activities turned out to be negligible.

### **Outcomes**

The only indicator used to measure the achievement of this objective was the rate of households' participation in thermal renovation investments. Actual achievement by project suspension was negligible – at less than 1 percent participation of households (1 MAB, with approximately 60 households) against a target of 50 percent by 2025.

Based on the above, efficacy for this objective is rated Negligible.

### **Rating**





Negligible

## OVERALL EFFICACY

### Rationale

Project efficacy for PDOs 1 and 2 were rated Modest and Negligible, respectively. To no small extent this was on account of the suspension of the operation, providing a limited time frame available in which to achieve the targeted results. Delays in implementing the GEF-supported TA activities also contributed to the situation. Based on this, and taking into account the preparatory work that had been completed before the suspension took effect, overall efficacy is rated Modest rather than Negligible.

### Overall Efficacy Rating

Modest

### Primary Reason

Low achievement

## 5. Efficiency

### Economic and Financial Efficiency

Economic analysis was carried out at appraisal for Components 1 and 2 separately (Component 3 being excluded by virtue of being a TA component), giving rise to NPV estimates of US\$98.5 million and/or US\$8.8 million, for investments in biomass district heating, depending on whether the benefits of emission reduction were factored in. Corresponding estimated economic rates of return were of the order of 15.6 percent and 6.6 percent, respectively. For investments in thermal renovation, NPV estimates varied greatly, ranging from US\$153 to \$207 million for Package A and US\$12 to 19 million for Package B, and ERR estimates from between 8.0 and 9.1 percent for Package A and 71.3 to 8.4 percent for Package B. (The relative shares of Packages A and B could not be predicted at appraisal, as this would depend upon the investment choices that apartment owners would make.

The project's efficiency was assessed as of the date of suspension by the ICR (pgs.18-19). This was based on investment costs incurred up to the time of the cancellation, with a similar adjustment made to the benefit stream. NPV estimates for Component 1 were 30.24 percent, factoring in emission reduction, and 12.71 percent without it. Corresponding EIRR estimates were of the order of 30.12 percent and 17.09 percent, respectively. For Component 2, given the limited results achieved, NNPV and EIRR estimates were effectively zero. Based on this, efficiency for Component 1 (US\$11.3 million disbursed) could be considered High, as per the ICR (p.19) and for Component 2 (zero disbursements), Negligible – suggesting an average rating of Substantial. However, in light of the very limited results actually achieved by the project in its significantly shortened implementation period, economic efficiency is rated here as Modest.

### Operational/Administrative Efficiency

In light of the very limited actual disbursements made before the project had to be closed on account of the suspension, operational and administrative efficiency is not evaluated here.





## Efficiency Rating

Modest

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 project's development objectives were substantially relevant to the World Bank's Country Partnership Framework FY18-22 and the Government's Program of Socio-Economic Development for 2016-20. Project efficacy was rated Modest for PDO1 and Negligible for PDO2, or Modest overall. Project efficiency was also rated Modest. On this basis, the project's overall outcome is rated Moderately Unsatisfactory.

### a. Outcome Rating

Moderately Unsatisfactory

## 7. Risk to Development Outcome

The overall risk of the project was rated High at appraisal, in view of the higher level of ambition of Component 2, as well as after suspension. Stakeholder risk at appraisal was also considered to be High, which was appropriate in light of the continued uncertainty of participation by EIB in the project's financing. However, according to the ICR (pgs. 31-32), post-suspension, stakeholder risk was not expected to increase immediately with the withdrawal of the World Bank, in light of the momentum that was built up for the buy-in by MAB householders, with one HOA having already signed up for the thermal renovations.

Other risks rated High post-suspension included Political and Governance risks, Macroeconomic risk, and Environmental and Social (which was compounded by the fact that the site-level ESMPs for Component 1 would need to be supervised and monitored even though the project had been suspended and the Bank retained little or no traction thereafter). Other risks rated Substantial included Sector Strategies and Policies, the Technical Design aspects of the Program, and Stakeholders. Institutional Capacity for Implementation and Sustainability was rated Moderate risk, with Fiduciary risk being rated Low.



## 8. Assessment of Bank Performance

### a. Quality-at-Entry

Preparation of the project was considered to have been comprehensive and innovative (ICR, p.29). The design of Component 1 was very similar to the Biomass District Heating Project, in terms of technical, financial and economic aspects. Component 2 addressed relevant poverty and gender aspects adequately, as well as Environmental and Social aspects, which were carefully planned for and addressed in a comprehensive ESMF and ESMPs. Financial management and procurement aspects were also fully assessed and provided for, to facilitate implementation. Institutional arrangements for implementation were adequately provided for at sector, municipality and HOA levels, combining private and public sectors. The third (TA) component was intended to provide analytical and technical support to the first two. Co-financing was initially mobilized from the EIB and GEF, with fiduciary and disbursement requirements largely harmonized. In totality, the project, as designed, was considered by the ICR as of a very high quality.

M&E arrangements were in keeping with World Bank practice, though implementation arrangements were impacted by Covid pandemic.

On the basis of the above, the project's quality at entry is rated Satisfactory.

### Quality-at-Entry Rating

Satisfactory

### b. Quality of supervision

According to the ICR (pgs. 29-30), the Bank team provided effective implementation support to the project – closely monitoring the activities leading to project effectiveness (for which three extensions needed to be granted, on account of delays in national approval procedures), and working proactively with the client by setting concrete goals and deadlines. Despite the initial bureaucratic delays, the team worked diligently to move the project forward – making progress in the preparation and implementation of the sub-projects under Component 1, and the necessary preparatory work for Component 2. Progress was also made in supervision of procurement and safeguards (including the review and approval of ESMPs at the site level) and social issues. Virtual missions being conducted regularly, and virtual progress report meetings being held every two weeks for Component 2.

A key focus of implementation support to Component 2 was to try and build capacity as rapidly as possible at the PMU, EED, and the oblast PIUs, among others. The Bank team provided capacity building training to employers on pilot program implementation and for preparing and reviewing the first energy audits for typical MABs. The supervision team also worked assiduously with homeowners, municipal public utility companies, municipal and oblast administrations and representatives of government bodies, including the MOHU and the Energy Efficiency Department, to develop the framework and modalities for outreach to MAB households. A fair amount of progress was made on these components up to the point of



suspension; for Component 1, in terms of the number of installations, and for Component 2, in terms of the completion of most of the preparatory work, with one MAB already committed to the thermal renovations. The risk of the project did however significantly increase with the continued uncertainty regarding EIB co-financing, since the project could not be restructured until EIB formally canceled its participation, so as to reduce its scope in keeping with the reduction in funding.

Based on this, quality of supervision is rated Satisfactory.

### **Quality of Supervision Rating**

Satisfactory

### **Overall Bank Performance Rating**

Satisfactory

## **9. M&E Design, Implementation, & Utilization**

### **a. M&E Design**

The Monitoring and Evaluation (M&E) plan for tracking the achievement of outcome and intermediate indicators was largely in keeping with standard World Bank practice. The indicators were clearly explained, and data sources and methodology, frequency of reporting and responsibility for collecting and compiling data were clearly defined. The ICR points out (p.26) that for the first two outcome indicators estimation of results essentially called for projections to be made over the lifetime (15 years and 25 years respectively, for Components 1 & 2), taking into account the investments made from baseline up to the time of suspension (rather than the original time of project closing). Supervision of the implementation of the ESMF was and ESMP was to be the responsibility of the PIUs, which would prepare and submit regular reports to the PMU, to be compiled into short information packages as part of overall progress reports to the World Bank.

### **b. M&E Implementation**

Since financing for the project became effective just as Covid-19 pandemic was gathering force, most of the implementation support missions were virtual, with video presentations providing updates on the project's progress. These appear to have substituted for written reports, none of which could be found in the project files, post-suspension (ICR, p.26). Subsequently, the PMU did forward data relating to the first two PDO indicators, pertaining to Component 1, since no thermal renovation investments had been made for Component 2.

### **c. M&E Utilization**

According to the ICR, it was not possible to assess M&E utilization since no monitoring reports were submitted during implementation (most monitoring activity taking place only over video conferencing).



## **M&E Quality Rating**

Modest

## **10. Other Issues**

### **a. Safeguards**

The project was classified as Category B, under Safeguards Policy, triggering OP/BP 4.01 – Environmental Assessment under the Bank's Safeguards Policy. As such, the Environmental and Social Management Framework (ESMF) was disclosed and consulted in Minsk in October, 2018.

For Component 1, ESMPs (Environmental and Social Management Plans) were required for each of the 35 subprojects identified, 31 of which had been approved and accepted by the World Bank environmental team (21 by the Social team), with the Environmental and Social Impact Assessments (ESIAs) being in compliance with the World Bank and national requirements. Component 2, no significant progress was recorded on site-specific ESMPs, as only one MAB application had been received as of December 2021. The ICR indicates (p.27) that full disclosure of the approved ESMPs was still pending, as a carry-over from the Covid-19 period, and insufficient information on ESMP implementation was available from the PMU, making it possible that the project could be out of E&S compliance, increasing its E&S risk at suspension.

### **b. Fiduciary Compliance**

According to the ICR (para 74), at approval the financial management arrangements had been found to be acceptable, and the FM risk had been rated Moderate. The PMU had responsibility for all fiduciary functions, in coordination with the district heating companies and PIUs at participating oblasts. Financial staffing was found to be adequate, with acceptable knowledge and training in World Bank procedures.

The FM monitoring review undertaken in July 2021 confirmed an FM rating of Satisfactory. The FM risk was rated as Moderate at suspension. The PMU reportedly had an accountant and FM specialist responsible for relevant FM and disbursement aspects. The ICR reports (p.28) that the required quarterly financial reporting (IFRs) began from 2nd quarter 2021 in the Client Connection system, and were found to be of acceptable quality. The first audit report of the project's financial statements covered both 2020 and 2021, since there had been no disbursements prior to that period, and was submitted to the Bank on June 30, 2022. The project's FM rating was Satisfactory at suspension.

The project's procurement risk was assessed by the Bank's supervision team as Moderate, and its Procurement Performance rating as Moderately Satisfactory. Procurement capacity was considered adequate for project implementation. Though there were delays and a lack of clarity on several



procurement issues during the period, much of this could be attributed to the circumstances leading up to the suspension.

**c. Unintended impacts (Positive or Negative)**

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**d. Other**

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## 11. Ratings

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

## 12. Lessons

Since the project was terminated early on account of the suspension, it is not easy to derive meaningful lessons from the operation. The ICR does however present one lesson based on the partial progress of the project:

**1. A combination of supply-side and demand-side interventions offer the best chance for improving energy efficiency (EE) and reducing the energy intensity of the country in one operation:** It can be argued that supply-side interventions are more wholesale in nature and involve relatively capital-intensive activities of a generally more technical nature, while demand-side interventions are more retail in nature, involving efforts to bring about behavioral changes. Project design for an operation combining these two types of interventions involve fundamentally different activities. Demand-side interventions can involve significant capacity-building, different modalities and changes in the implementation mind-set, together with innovative approaches to creating the appropriate incentive models. Since innovation is usually accompanied by risk, managing the risk calls for adequate resourcing and realistic timetables. In the case of the project in question, the lower-risk of Component 1 was utilized in project design to offset the higher risk of Component 2, in an attempt to deliver a relatively ambitious operation, while keeping its risk profile within the World Bank's risk appetite. Unfortunately, the project had to be suspended before it could be fully implemented.



### 13. Assessment Recommended?

No

### 14. Comments on Quality of ICR

The ICR is generally well written, concise and internally consistent. The theory of change is appropriate and a fair amount of detail is provided on the issues affecting the preparation and implementation of the project. The achievement of objectives is adequately analyzed, as is the Risk to Development Outcomes, bearing in mind the limited progress actually made by the project on account of the unforeseen suspension. Overall, the narrative appears to support the ratings and available evidence.

#### a. Quality of ICR Rating

Substantial