Report Number: ICRR0022705

1. Project Data

Project ID	Project Name
P127203	HT Rebuilding Energy Infrastr & Access
Country	**Practice Area(Lead)**
Haiti	Energy & Extractives

L/C/TF Number(s)	Closing Date (Original)	Total Project Cost (USD)
IDA-H8060	31-Dec-2017	42,636,084.26
Bank Approval Date	**Closing Date (Actual)**	
27-Sep-2012	31-Aug-2020	

	IBRD/IDA (USD)	Grants (USD)
Original Commitment	90,000,000.00	0.00
Revised Commitment	48,994,022.89	0.00
Actual	42,636,084.26	0.00

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2. Project Objectives and Components

a. Objectives

According to the Financing Agreement (p.5), dated November 6, 2021, the objectives of the Project were to (a) strengthen the Recipient's energy policy and planning capacity; (b) improve the sustainability and resilience of the Recipient's electricity sector and restore and expand access to reliable electricity services; and (c) provide financial assistance in case of an Energy Sector Emergency. The objectives were expressed in the PAD (p.10) in identical manner.

For assessing efficacy of the project in this review, the objectives are split into four: 1) strengthen the Recipient's energy policy and planning capacity; 2) improve the sustainability and resilience of the Recipient's electricity sector; 3) restore and expand access to reliable electricity services; and 4) provide financial assistance in case of an Energy Sector Emergency.

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

Yes

Did the Board approve the revised objectives/key associated outcome targets?

Yes

Date of Board Approval

30-Jun-2017

c. Will a split evaluation be undertaken?

Yes

d. Components

The Project included three components.

Component 1: Sector Institutional Strengthening and Energy Access (appraisal estimate US$13.06 million, of which IDA financing: US$12.16 million; actual project cost US$16.77 million, of which IDA financing US$16.77 million)

This component aimed to:

(a) Strengthen the institutional capacity of the Ministry in charge of energy and enhance governance and transparency in the recipient's energy sector through: (i) the establishment and staffing of an energy unit in the Ministry in charge of energy; (ii) technical assistance to the above energy unit; (iii) outreach activities and information dissemination campaigns; and (iv) support for project management.

(b) Improve off-grid electricity access through: (i) new off-grid electricity connections solutions; (ii) the establishment of a regulatory framework for the preceding and the provision of training to enhance the Ministry’s capacity; (iii) acquisition and installation of 100 solar public lights and provision of off-grid electricity connections to 2,000 additional customers; and (iv) acquisition and installation of new off-grid electricity connections, such as public solar lighting, solar home systems and/or mini-grids, and solar lanterns.

Component 2: EDH Performance Enhancement and Infrastructure Rehabilitation and Expansion (appraisal estimate US$78.42 million, of which IDA financing: US$77.84 million; actual project cost US$25.68 million, of which IDA financing: US$25.68 million)

This component aimed to:

(a) Enhance the performance of the energy utility (Electricité d’Haïti: EDH) through: (i) strengthening of its management capacity; (ii) technical assistance to support EDH’s technical, commercial, financial and strategic planning; (iii) technical assistance to enhance EDH's capacity to supervise compliance with environmental and social standards; (iv) carrying out a master plan for EDH to assess electricity demand and define priority investments; (v) extension of EDH's billing system to the entire territory; (vi) installation of a remote metering system for EDH’s large industrial and commercial clients; and (vii) technical assistance to assist EDH in carrying out external financial audits.

(b) Rehabilitate electricity grids and extend energy access through: (i) rehabilitation of five grid circuits in the PAP metropolitan area, including the installation of required metering equipment; (ii) rehabilitation of the remaining grid circuits in the PAP metropolitan area, including the installation of metering equipment; (iii) installation of new residential connections to EDH's distribution network through grid densification and/or extension; (iv) rehabilitation of EDH's distribution networks and installation of metering equipment in select areas other than the PAP metropolitan area, such as Artibonite, Cap Haitien and Petit and Grand Goave; (v) establishment of new connections in EDH's networks through grid extension and/or densification; and (vi) rehabilitation of the micro hydroelectric plant (2.5MW) in Drouet.

Component 3: Emergency Response (appraisal estimate US$0 million, actual US$0 million)

This component aimed to address any energy sector emergency through: (i) carrying out emergency recovery and rehabilitation activities; and/or (ii) technical assistance to support MTPTEC and EDH in its response to an energy sector emergency.

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

Project Cost: At appraisal, the project was estimated to cost US$91.48 million. Actual cost was US$42.64 million according to the project data sheet (p.2). Annex 3 Project Cost by Component (p.61) reported a slightly different amount of US$42.45.

Financing: The project was to be financed through International Development Association (IDA) Grant in the amount of US$ 90million (revised amount US$48.99 million). Actual disbursement was US$42.64 million.

Borrower Contribution: The borrower was to contribute US$1.48 million, however, there was no actual contribution according to the project data sheet (p.2). Annex 3: Project Cost by Component (p.61) did not specify whether and how much the borrower contributed.

Dates: The project was approved on September 27, 2012 and became effective on February 6, 2013. The project’s original closing date was December 31, 2017 and it actually closed on August 31, 2020. The project was restructured five times. The first was on June 30, 2017, when the Bank had disbursed US$18.7 million, to make changes in the results framework and to reallocate funds between categories. The second was on January 17, 2018, when the Bank had disbursed US$24.30 million, to make changes in results framework, components and cost, closing date, and implementation schedule, to cancel a part of financing, and to reallocate between categories. The third was on July 1, 2019, when the Bank had disbursed US$35.36 million, to make changes in results framework and components and cost, and to reallocate between categories. The fourth was on November 27, 2019, when the Bank had disbursed US$38.10 million, to make changes in components and cost, closing date, and implementation schedule, and to reallocate between categories. The fifth was on August 27, 2020, when the Bank had disbursed US$41.05 million, to make changes in components and costs, to cancel a part of financing, and to reallocate between categories. The ICR did not specify which of these restructurings were level 1 and level 2, however, the ICR author confirmed that all of the restructurings were level 2.

3. Relevance of Objectives

Rationale

At the time of project preparation, Haiti's energy sector was facing a dual crisis in the electricity and household energy sectors. The electricity sector suffered from a lack of supply, poor quality of service, high costs, inadequate governance and oversight, and unsustainable financial fundamentals. In the household energy sector, overreliance on scarce wood fuel resources for cooking had serious economic, environmental and health impacts.

At appraisal, the objectives were aligned with the World Bank's Country Partnership Framework (CPF) for Haiti FY16-FY19. The project was expected to directly contribute to the CPF's Objective 3, "Increase Energy Access and Support Renewable Energy", under the CPF's first area of focus, "Enhance Inclusive Growth". The project was also aligned with the CPF's third area of focus, "Resilience", through the project's financing of related technical assistance and solar electricity infrastructure under Component 1. Finally, the project's PDO was directly relevant to the CPF's cross-cutting theme of Governance, especially improving economic governance and government effectiveness, through its outcomes related to strengthening EDH's performance, internal management and administration, and service provision. The objectives were also aligned with the Government of Haiti's strategy. The objectives were also aligned with the Government of Haiti's Draft Energy Policy Report in January 2012, which defined the Government's five key objectives of its energy policy: (i) Ensure sufficient supply to meet demand and support economic growth; (ii) Promote energy savings and efficiency; (iii) Promote development of indigenous renewable sources of energy ; (iv) Pursue exploration of fossil fuel sources in Haiti; and (v) Create a regulatory framework to encourage the development of supply while protecting the environment.

At closure, the objectives continued to be in line with the World Bank's CPF, as it was extended through June 2021. Although the Government of Haiti did not have an energy policy in place at project closure, basic problems that the project was designed to address clearly remained the core issues for the sector and the objectives continued to be relevant to the country's needs.

However, the objectives and the scope of the project were too ambitious. According to the team, which provided supplementary details, there was strong momentum from both government and development partners, and the objectives and the scope were set at a high level at appraisal. However, every objective is observed to have suffered from low achievements and many targets were lowered or removed through a series of restructurings, giving rise to the conclusion that they were set at too high a level, considering the fragile context of the country. For this reason, the relevance of objectives is rated as Substantial

Rating

Substantial

4. Achievement of Objectives (Efficacy)

OBJECTIVE 1

Objective

To "strengthen the Recipient's energy policy and planning capacity"

Rationale

The project's theory of change is presented in the ICR (p.9). The causal chain consists of strengthening energy sector institutions, enhancing EDH's performance, rehabilitating and expanding infrastructure, and improving energy access, which would result in strengthened energy policy and planning capacity, improved sustainability and resilience of the energy sector, restored access to reliable electricity services and expanded access to reliable electricity services. Key assumptions included political stability, implementation readiness, continuation of the donor support for economic recovery, continued maintenance and investment in the electricity sector and the utility. The theory of change is generally logical and includes necessary activities and outputs to achieve outcomes except possibly for the recipient's energy policy and planning capacity. It is unclear that an updated regulatory framework, a staffed and operational unit and beneficiaries informed of sector plans and policies would in themselves be sufficient to achieve 'strengthened energy policy and planning capacity'.

This theory of change applies to all the sub-objectives and is therefore not repeated in the respective efficacy discussions that follow below.

The results framework was revised through a series of restructurings mainly to reduce targets or to remove indicators. The restructuring in June 2017 dropped the indicator on implementation aspect of the regulatory framework under Objective 1 and reduced the target of direct beneficiaries from 600,000 to 500,000 under Objective 3. The restructuring in January 2018 reduced the target of EDH's Cash Recovery Index from 51% to 35% under Objective 2 and further reduced the target of direct beneficiaries from 500,000 to 200,000 under Objective 3. The restructuring in July 2019 dropped the indicator on effectiveness aspect of the energy cell under Objective 1.

Outputs

- [Energy Cell] An Energy Cell, which was mandated to oversee energy policy matters, was created in the Ministry of Public Works, Transport, Energy and Communication. At project closing, the Energy Cell was staffed by 2 permanent staff plus 5 technical experts and 3 administrative consultants. Original target was 5 permanent staff. No clear evidence is provided regarding the Cell's effectiveness.
- [Monitoring of Budgetary Transfers] An updated financial outlook for EDH was prepared based on use of the financial model to make forecasts of future budgetary transfers. A financial monitoring table for fiscal year 2017-2018 was prepared and published. The financial model has been utilized to prepare yearly budget proposals to the MEF and to stimulate the impact of commercial recovery actions on EDH's financial sustainability. Regular monitoring of the sector's financial outlook is not being done and the model requires further updating.

- [Regulatory Framework] Draft law on the implementation of the energy sector reform was prepared and sent to the Cabinet of the Ministry overseeing on May 31, 2017. The National Regulatory Authority of the Energy Sector (ANARSE) was established on February 23, 2016 to define institutional responsibilities with clear accountability and to regulate production, operation, transmission, distribution, and marketing of electricity. No clear evidence is provided regarding effective implementation of the regulatory framework.

Outcomes

- The outcome for this objective was the Recipient's strengthened energy policy and planning capacity, which was to be measured by the improved ability of Government entities to oversee energy sector issues and increased awareness of energy sector developments by the public. The outputs specified above partially support the outcome but do not seem enough to claim that the Government's ability was improved and the public's awareness was increased. Further, IEG could not find additional evidence on this outcome from the ICR or the TTL.

Although an energy cell was created and staffed and there was some progress in the regulatory framework, there were certain achievements at the output level, enough evidence was not provided by the ICR or the TTL to evaluate if the recipient's energy policy and planning capacity was strengthened. Because of this lack of evidence, this objective is only partially achieved and rated as Modest.

Rating
Modest

OBJECTIVE 1 REVISION 1

Revised Objective
To "strengthen the Recipient's energy policy and planning capacity"

Revised Rationale
Outputs

The following targets were revised with the restructurings in June 2017 and July 2019 and achievement was the same as described above.

- [Energy Cell] The targets dropped an aspect of demonstrated effectiveness of the Energy Cell (July 2019) Other targets e.g. establishment of energy cell remained the same.
- [Monitoring of Budgetary Transfers] Target was revised from "Availability of EDH's updated financial outlook and forecasts of future budgetary transfers needed, as part of the financial model" to "Budgetary transfers to EDH and availability of financial outlook monitored". No clear explanation about the difference between the original and revised targets is provided.
- [Regulatory Framework] The targets dropped an aspect of effective implementation of the regulatory framework (June 2017). Other targets e.g. draft regulatory framework remained the same.

Outcomes

- The outcome for this objective was the Recipient’s strengthened energy policy and planning capacity, which was to be measured by the improved ability of Government entities to oversee energy sector issues and increased awareness of energy sector developments by the public. The outputs specified above partially support the outcome but do not seem enough to claim that the Government’s ability was improved and the public’s awareness was increased. Further, IEG could not find additional evidence on this outcome from the ICR or the TTL.

The revision of targets lowered the bar. Although an energy cell was created and staffed and there was some progress in the regulatory framework, enough evidence was not provided to evaluate if the recipient’s energy policy and planning capacity was strengthened. Because of this lack of evidence, this objective is only partially achieved and rated as Modest.

Revised Rating
Modest

OBJECTIVE 2

Objective
To "improve the sustainability and resilience of the Recipient's electricity sector"

Rationale
Outputs

- [Service Availability] As of June 2017, when this indicator was last reported, average daily service availability in the Port-au-Prince Metropolitan zone had declined from a baseline of 15 hours to 12.1 hours, against the original target of 20 hours. The average daily service availability in the Provinces had declined from a baseline of 11.9 hours to 9.1 hours, against the original target of 15 hours.
- [Technical and non-technical losses] Technical and non-technical losses declined from a baseline of 66 percent to 58.2 percent by November 2019, against the original target of 40 percent. However, the losses increased to 70 percent (52 percent non-technical and 18 percent technical) in mid-2020 during political and administrative instability.
- [External audits of EDH accounts] At the approval of the project, no audits of EDH’s accounts had been conducted since 2006. The original target was to have EDH’s accounts audited within six months of the end of each fiscal year. An audit report of EDH’s accounts for 2006-2016 was produced in February 2020. However, no clear evidence is provided as to whether such audits were conducted after 2016.

Outcomes

- [Cash Recovery Index] EDH’s Cash Recovery Index increased from a baseline of 22 percent to 37.8 percent by the project closure, against the original target of 51 percent. EDH’s weak financial performance was mainly because of the spread between extensive billing and low revenue collection, especially in the provinces.

- [Revenue Collection Rate] EDH's revenue collection rate in Port-au-Prince improved from a low of 60% in 2013 to 80- 90% during the period 2015-2018. Likewise, that in provinces improved from a low of less than 50% in 2014 to 60-70% during the period 2015-2018. However, those gains were lost due to security issues and management deficiencies. The revenue collection rate in Port-au-Prince and in provinces in 2019 were both about 50%. No target was provided for this indicator.

Given service availability declined, technical and non-technical losses saw a decrease and increase, the revenue collection rate once improved but deteriorated in the end, and the Cash Recovery Index increased but did not reach target, this objective is only partially achieved and rated as Modest.

Rating
Modest

OBJECTIVE 2 REVISION 1

Revised Objective
To "improve the sustainability and resilience of the Recipient's electricity sector"

Revised Rationale
The following changes were made to the indicators under this objective through the restructuring in January 2018.

Outputs

- [Service Availability] The indicator for average daily service availability in the Port-au-Prince Metropolitan zone and in the Provinces was dropped in the January 2018 restructuring. The ICR did not however provide a reason why this indicator was dropped.

- [Technical and non-technical losses] Technical and non-technical losses declined from a baseline of 66 percent to 58.2 percent by November 2019, against the revised target of 50 percent, which was eased from the original target of 40 percent in the January 2018 restructuring.

- [External audits of EDH accounts] At the approval of the project, no audits of EDH's accounts had been conducted since 2006. The original target was to have EDH's accounts audited within six months of the end of each fiscal year. An audit report of EDH's accounts for 2006-2016 was produced in February 2020. However, no clear evidence is provided as to whether such audits were conducted after 2016.

Outcomes

- [Cash Recovery Index] EDH's Cash Recovery Index increased from a baseline of 22 percent to 37.8 percent by the project closure, against the revised target of 35 percent, which was eased from the original target of 51 percent in the January 2018 restructuring.

Although revised Cash Recovery Index target was achieved, technical and non-technical losses did not achieve revised target and revenue collection rate once improved but deteriorated in the end. Therefore, this objective is only partially achieved and rated as Modest.

Revised Rating
Modest

OBJECTIVE 3

Objective
To "restore and expand access to reliable electricity services"

Rationale
Outputs

- [Off-grid access] 2,038 off-grid systems (1,633 solar streetlights and 405 photovoltaic systems in schools) were financed, which was 408 percent achievement against the original target of 500 off-grid systems. Though the ICR claimed that the target for off-grid connections was achieved (19,040 connections, against the original target of 5,200), it would appear that 19,040 referred actually to the number of students who benefitted from Photovoltaic Systems, not the number of off-grid connections. No clear data were provided regarding the number of off-grid connections.
- [Restored connections] 16,806 connections were restored, which was 25 percent achievement against the original target of 67,000.
- [Distribution lines] 186km of distribution lines were rehabilitated, which was 48 percent achievement against the original target of 390km.

Outcomes

- The number of direct beneficiaries was 151,822 at project closure (86,882 people benefiting from new or improved access to electricity, 19,040 students benefiting from off-grid connections, and 45,900 people benefiting from solar street lighting), which was 25 percent achievement against the original target of 600,000.

Given the low achievement mentioned above, this objective was barely achieved and rated Negligible

Rating
Negligible

OBJECTIVE 3 REVISION 1

Revised Objective

To "restore and expand access to reliable electricity services"

Revised Rationale
Outputs

- [Off-grid access] 2,038 off-grid were financed, which was 136 percent achievement against the revised target of 1,500 off-grid systems. No clear evidence is provided regarding the number of off-grid connections against the revised target of 15,000 connections (the target was revised in the restructuring in July 2019).

- [Restored connections] 16,806 connections were restored, which was 51 percent achievement against the revised target of 33,000 (the target was revised in the restructuring in January 2018).

Outcomes

- The number of direct beneficiaries was 151,822 at project closure, which was 30 percent achievement against the revised target of 500,000 (restructuring in June 2017) and 76 achievement against the revised target of 200,000 (restructuring in January 2018).

Given some targets were partially achieved against the revised targets as mentioned above, this objective is rated Modest.

Revised Rating
Modest

OBJECTIVE 4

Objective
To "provide financial assistance in case of an Energy Sector Emergency"

Rationale
This objective was related to an Energy Sector Emergency component and allocated no funds. The component was not triggered during the life of the project.

Rating
Not Rated/Not Applicable

OBJECTIVE 4 REVISION 1

Revised Objective
To "provide financial assistance in case of an Energy Sector Emergency"

Revised Rationale

This objective was related to an Energy Sector Emergency component and allocated no funds. The component was not triggered during the life of the project.

Revised Rating
Not Rated/Not Applicable

OVERALL EFFICACY

Rationale
The project intended to strengthen the Recipient’s energy policy and planning capacity, improve the sustainability and resilience of the Recipient's electricity sector and restore and expand access to reliable electricity services. The project’s achievement is limited to output level in terms of the Recipient’s energy policy and planning capacity. Sustainability and resilience of the electricity sector was improved but to a limited extent. For restoring and expanding access to reliable electricity services, the achievement was low against the original target.

SInce Objectives 1 and 2 are rated modest, and Objective 3 is rated negligible, overall efficacy is rated Modest.

Overall Efficacy Rating	Primary Reason
Modest	Low achievement

OVERALL EFFICACY REVISION 1

Overall Efficacy Revision 1 Rationale
The project intended to strengthen the Recipient’s energy policy and planning capacity, improve the sustainability and resilience of the Recipient's electricity sector and restore and expand access to reliable electricity services. The project’s achievement is limited to output level in terms of the Recipient’s energy policy and planning capacity. Sustainability and resilience of the electricity sector was improved but to a limited extent. For restoring and expanding access to reliable electricity services, the achievement was modest against the revised target.

Since Objectives 1, 2 and 3 are all rated modest, overall efficacy is rated Modest.

Overall Efficacy Revision 1 Rating	Primary Reason
Modest	Low achievement

5. Efficiency

Economic Efficiency:

The PAD (p,19) included economic analysis for the project at entry.

The analysis used the following assumptions, which seem to be standard for an energy project. The analysis focused on the benefits deriving from the loss reduction resulting from the rehabilitation of the distribution system and the collection improvements. Costs included capital investments and associated operation and maintenance (O&M) costs. The analysis used 10 percent as discount rate.

For the base case, the overall Economic Rate of Return (ERR) of the project was estimated to be 40 percent, with US$160 million of Net Present Value (NPV). The analysis also provided breakdown by components. For component 1 (Sector Institutional Strengthening and Energy Access), the ERR and NPV was estimated to be 30 percent and US$8 million. For component 2 (EDH Performance Enhancement and Infrastructure Rehabilitation and Expansion), the ERR and NPV was estimated to be 41 percent and US$153 million.

Sensitivity analysis showed that, in a scenario with 20 percent higher initial capital costs and 20 percent lower benefits, ERR and NPV were estimated to be 13 percent (15 percent for component 1 and 12 percent for component 2) and US$14 million (US$2 million for component 1 and US$12 million for component 2), which was still acceptable.

The ICR (p.62) presented economic analysis for the project at completion.

The analysis used the following assumptions, which again seem to be standard for an energy project. The analysis calculated benefits deriving from increased hours of energy service, reduced hours of power outages, and additional energy from new connections. Costs included capital investments and associated operation and maintenance (O&M) costs. The analysis used 10 percent as discount rate.

The ERR and NPV of the project were estimated to be 33 percent (11 percent for component 1 and 34 percent for component 2) and US$72 million (US$4 million for component 1 and US$68 million for component 2). According to the ICR (p.27), this relatively high ERR despite low achievement is explained by the relatively much lower cost (planned US$91.48 million vs actual US$42.64 million), the investments in the distribution network enhancement, and the benefits from improved revenue collection. That said, the estimated ERR still appears to be on the high side for this under-performed project.

Operational and Administrative Efficiency

There were challenges that impacted operational efficiency of the project. First, the project's duration was extended from five to eight years to respond to the slow progress of the project. The restructurings were conducted to adapt to changing circumstances, however, they did not improve the project's implementation or efficacy. Second, some project activities were delayed due to the following factors. Preparation of bidding documents and procurement processes for infrastructure rehabilitation were delayed due to some design shortcomings at approval. Civil works and goods acquisitions were also delayed due to noncompliance with a withdrawal condition in the Financing Agreement regarding EDH's management structure.

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	✓	40.00	0 ☑ Not Applicable
ICR Estimate	✓	33.00	0 ☑ Not Applicable

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

6. Outcome

To calculate the value of outcome rating, the restructuring in January 2018, in which major target revisions were made, is taken as the dividing point - before and after restructurings. A 6-point scale is used as the rating scale for this split evaluation.

Before restructuring: Relevance of objectives was rated substantial. Efficacy was rated modest due to low achievements. Efficiency was rated Modest due to shortcomings in operational efficiency. Based on substantial relevance, modest efficacy and modest efficiency, Outcome is rated Moderately Unsatisfactory.

After restructuring(s): Relevance of objectives was rated substantial. Efficacy was rated modest due to low achievements. Efficiency was rated Modest due to shortcomings in operational efficiency. Based on substantial relevance, modest efficacy and modest efficiency, Outcome is rated Moderately Unsatisfactory.

The value of outcome rating before restructuring is 3 (Moderately Unsatisfactory) and after restructuring is 3 (Moderately Unsatisfactory). The share of disbursement before restructuring is 57.0% (US$24.3 million) and after restructuring is 43.0% (US$18.3 million). The weighted value of the outcome rating before restructuring is 1.71 and after restructuring is 1.29. The value of the overall outcome rating 3.00, therefore the final outcome rating is Moderately Unsatisfactory.

a. Outcome Rating

Moderately Unsatisfactory

7. Risk to Development Outcome

There were several risks that could undermine the sustainability of the project’s development outcomes. These included:

- Operation & Maintenance of the physical investments supported by the project would be insufficient due to EDH's limited capacity, which is evidenced by the following: low electricity billing and collection ratio of 42 percent and 87 percent, respectively; low Cash Recovery Index at 38 percent, high non-technical losses of 43 percent; low productivity, at 89 clients per employee; high personnel expenditure at 35 percent, heavily donor financing-dependent financial situation.
- No maintenance activities are planned for public lighting, solar electrification, and digital interactive tables that were achieved through the project. Municipal authorities, who now own the infrastructure, have no resources or technical expertise to manage them in a sustained manner. For example, as reported by the ICR (p.44), the solar plant commissioned in 2018 to light the Champ de Mars was out of service three years later, and there were no institutions with the skills or funds to repair it, as the guarantee period had elapsed.
- Persistent political instability, resistance to change, and difficulties of sustaining Government commitment could undermine incremental institutional improvements achieved through the project.

8. Assessment of Bank Performance

a. Quality-at-Entry

- The project's design was strategically relevant as it aimed to respond to the challenges of the electricity sector at the time of appraisal. The electricity sector was suffering from a lack of supply, poor quality of service, high costs, inadequate governance and oversight, and unsustainable financial fundamentals. The project was adequately designed to address these challenges.
- The PAD identified institutional and implementation arrangements while the country was in a fragile environment after the earthquake. While it designated the Ministry of Public Works, Transport, Energy and Communication as the responsible entity for the overall coordination of the project, the arrangement was tentative until the new institutional arrangements were formalized. This kind of flexible arrangement was necessary in such a fragile environment as Haiti.
- The PAD adequately identified major risks using the Operational Risk Assessment Framework. The risks identified as 'high' included lack of sustained political commitment, coordination among stakeholders, lack of implementation and monitoring capacity of the government, governance (corruption) issues, and EDH's fragile financial situation. However, mitigation measures were not effective enough in the challenging country context. For example, conditioning the withdrawal of IDA grant funds on EDH's management structure improvements did not improve institutional performance and was even counterproductive.
- The project was however too ambitious in light of the challenging and fragile country environment and the weak capacity of the implementing agency, which the Bank team was well aware of from the risk assessment. This is evidenced by the project's targets being significantly lowered multiple times through subsequent restructurings.
- Given the moderate shortcomings discussed above, the quality at entry is rated Moderately Satisfactory.

Quality-at-Entry Rating
Moderately Satisfactory

b. Quality of supervision

- 12 supervision missions were carried out over the project period of eight years and the outcome of the missions was summarized in Aide Memoires and Implementation Status and Results Reports. The documentations were generally thorough and candid and identified important implementation issues.
- The Bank team conducted a Mid-Term Review in April 2016 and its findings led to the first restructuring in June 2017, which made changes in the results framework and reallocated funds between categories
- During nine years of project preparation and implementation, the project had three Bank TTLs, which can be considered fair in terms of ensuring continuity. No Bank TTLs were based in Haiti until 2019.
- A series of restructurings was only incremental and not fully effective in course-correcting the project's path, which was a moderate shortcoming of supervision. By the time of the Mid-Term Review in April 2016, it was clear that the project would not be able to achieve some outcomes including restoring and expanding access and improving sector sustainability. More radical restructurings should have been considered, including, for example, a fundamental revision of the PDO and key indicators and dropping reforms that were no longer possible. The results framework of the project was revised three times through these restructuring, however, the changes were basically aimed at lowering targets in response to capacity and time constraints, rather than addressing fundamental issues of the framework itself. The project team clarified in a subsequent discussion that the actions taken were the best the Bank team could take in light of the difficult situation during implementation, including political instability and declining commitment from the government.

Quality of Supervision Rating
Moderately Satisfactory

Overall Bank Performance Rating
Moderately Satisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design

- The project objectives were clearly specified in the PAD. The overall results chain showed logical linkages between activities, outputs, and outcomes.
- There were significant shortcomings in PDO indicators and targets. For PDO1 (Strengthen energy policy and planning capacity), the key indicator (Strengthening of Government's oversight capacity and transparency in sector financial flows) was just a rephrased statement of the outcome. The targets for PDO1 were somewhat vague and hard to measure. For PDO2 (Improve the

sustainability and resilience of the electricity sector), the key indicator (EDH's CRI) was not comprehensive enough to assess if the electricity sector's sustainability and resilience improved or not. For PDO3 (Restore and expand access to reliable electricity services), the key indicator (the number of project beneficiaries) was again not sufficient to assess whether or not the outcome was met.
- According to the PAD (p.16), the Ministry of Public Works, Transport, Energy and Communication was given overall responsibility for the M&E of the project. The Project Coordinating Unit (PCU) was created in the Ministry and in charge of preparation of the project's M&E reports including the quarterly reports on the performance of the project, the quarterly Interim Financial Reports, and the annual independent financial audits of the project and of EDH.

b. M&E Implementation

- Setting up an operational M&E system was delayed, and an M&E specialist was not hired until August 2016. The PCU was dependent on EDH's report on its performance, however, EDH did not implement such regular reporting.
- The results framework was revised three times through a series of restructurings. However, the changes made were not to address fundamental issues of the framework itself, but to only lower targets. The TTL of the project clarified that the actions taken were the best the Bank team could take considering the difficult situation during the implementation including political instability and declining commitment from the government.

c. M&E Utilization

- M&E data and findings were used to assess the progress of the project in the Mid-Term Review in 2016, and to inform decisions related to restructurings. However, with more robust indicators and targets, the project team could have assessed project outcomes more precisely and made more informed decisions regarding the restructurings.

Overall, M&E design had significant shortcomings, implementation was poor, and there were missed opportunities in M&E utilization. Therefore, M&E quality is rated Modest.

M&E Quality Rating

Modest

10. Other Issues

a. Safeguards

- The project was classified as Category B and triggered the following Safeguard policies: Environmental Assessment (OP/BP 4.01), Involuntary Resettlement (OP/BP 4.12) and Safety of

Dams (OP/BP 4.37). An Environmental and Social Management Framework and a Resettlement Policy Framework were prepared and disclosed prior to appraisal.

- The PCU did not have a dedicated staff to deal with environmental and social issues, which led to certain delays in reporting on environmental and social matters.
- According to the final ISR (Seq No.12, archived in March 2020), project counterparts reported a rumor of a possible gender-based violence case related to the Drouet Micro hydroelectric rehabilitation sub-project. Although the alleged incident could not be confirmed, the Bank team strengthened prevention and mitigation measures in the project as well as other active energy projects.
- In August 2019, there was a fatal incident of a contractor's team member who was installing solar lighting on the Champ de Mars, but there was a long delay in reporting to the Bank. The Bank team documented the fatality through Environment and Social Incident Response Toolkit (ESIRT). The team concluded that the incident was a direct consequence of civil unrest and the contractor had undertaken mitigation measures to the extent possible. This incident alerted the Bank team regarding the timeliness of incident reporting.
- During the last Bank mission to Haiti, a contractor brought three Occupational Health and Safety incidents to the Bank team's attention, which were all classified as indicative. They were about improper storage of used lubricant in barrels on the site, improper use of removed sediment, and inadequate use of personal protective equipment on site. These indicative incidents were investigated, evaluated, managed, and resolved in accordance with ESIRT guidance.
- Overall, there was compliance in addressing safeguard policies triggered according to the project team, although the ICR was not exactly clear on this point.

b. Fiduciary Compliance

Financial Management

- The ICR reports (p.39) that according to the ISRs, there were no financial management compliance issues in the project. The financial management performance rating was in the range of Moderately Satisfactory to Satisfactory throughout the project period. All financial covenants were compiled with by project closing according to the TTL of the project. According to the final ISR in March 2020, the project lacked an effective tool to monitor budget execution and to identify delaying factors, and the budget execution rate remained low.
- As of the ICR, the project team was awaiting the submission of the final external audit. The TTL of the project informed IEG that the Bank received the final external audit report dated June 24, 2021 on July 21, 2021, which was more than three months after the deadline provided in the Financing Agreement. The audit report was in compliance with the World Bank guidelines and was acceptable to the Bank. There was no qualified opinion from the auditor. The TTL also mentioned to IEG that earlier audit reports submitted to the Bank often missed the deadline, which was not uncommon in fragile countries.

Procurement

- Although there were no substantive procurement compliance problems reported, the project suffered from significant procurement delays. The procurement rating had been downgraded from

Moderately Satisfactory to Moderately Unsatisfactory in January 2019 until project closure on account of serious delays in procurement document preparation for the Dispatching Center. The ISR in March 2016 reported two instances of significant procurement delays caused by eligibility of a firm to be short-listed for bidding.

c. Unintended impacts (Positive or Negative)

N/A

d. Other

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11. Ratings

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

12. Lessons

IEG derives the following lessons, drawn from the ICR:

- **The momentum of a post-natural disaster reconstruction effort cannot necessarily be relied on in a fragile political and social context.** For this project in Haiti, the Bank made a deliberate decision to support relatively ambitious objectives, assuming that the commitment to reforms and performance improvements generated by the earthquake reconstruction would be sustained. However, this ignored the fundamental realities of a fragile country, which included very low levels of trust between State and citizens, limited government effectiveness, weak institutions, concentration of productive assets in the hands of a few and high inequality.
- **The principles of simplicity and selectivity are best followed for projects in FCV situations.** As the World Bank Group Strategy for Fragility, Conflict, and Violence 2020-2025 advocates, investment operations in FCV countries should be modest in both scope and objectives, especially when it comes to policy and institutional reforms. If country conditions improve, allowing a project to reach or exceed expectations, then the project can be scaled up using Additional Financing or via a follow-on operation.

- **Policy conditionality may not improve institutional performance in the absence of political will.** The project was designed to make infrastructure investments conditional on a reform of EDH's management structure. However, this reform was never implemented, and on-grid and off-grid electricity infrastructure development was deferred until too late. It might have been more prudent to have avoided the conditionality and allowed the physical investments and the institutional development run on separate tracks.

13. Assessment Recommended?

No

14. Comments on Quality of ICR

The ICR provides a good overview of project preparation and implementation and is sufficiently candid about implementation challenges and shortcomings. The ICR is appropriately consistent and results-oriented. The ICR also provides useful lessons for future operations in FCV context. Shortcomings included insufficient project costs data, lack of information on restructuring levels, insufficient information on fiduciary and safeguard compliance. Overall, the quality of the ICR is rated Substantial.

a. Quality of ICR Rating

Substantial