



1. Project Data

Project ID P071391	Project Name NG-Natl Urb Water Sec Ref SIM 2 (FY06)	
Country Nigeria	Practice Area(Lead) Water	Additional Financing P115658
L/C/TF Number(s) IDA-40860,IDA-51290	Closing Date (Original) 30-Jun-2011	Total Project Cost (USD) 220,000,000.00
Bank Approval Date 01-Jul-2005	Closing Date (Actual) 31-May-2016	
	IBRD/IDA (USD)	Grants (USD)
Original Commitment	200,000,000.00	0.00
Revised Commitment	312,717,396.52	0.00
Actual	306,540,467.36	0.00

Prepared by Katharina Ferl	Reviewed by Vibecke Dixon	ICR Review Coordinator Christopher David Nelson	Group IEGSD (Unit 4)
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2. Project Objectives and Components

a. Objectives

According to the Project Appraisal Document (PAD) (p. 4) the objective of the project was to “(i) improve reliability of water supply produced by the water treatment works in Lagos; (ii) increase access to piped water networks in four cities in Cross River State; and (iii) improve commercial viability of the urban water utilities in Cross River and Lagos States.” According to the Credit Agreement of July 15, 2005 (p. 26) the objective of the project was to “(i) improve the reliability of water supply produced by the water treatment works in Lagos State; (ii) increase access to piped water networks in Cross River State; and (iii) improve the commercial viability of urban water utilities in Participating States. Both set of objectives are almost identical, and the small variations only relate to how coverage has been formulated.



According to the Financing Agreement of September 9, 2013 (p. 6) for the Additional Financing, the objective of the project was revised to “(i) improve the reliability of water supply produced in the Participating States; (ii) increase access to piped water networks in Lagos State and in seven cities in Cross River State; and (iii) improve the commercial viability of urban water utilities in the Participating States.” The PDO remained largely the same, but with some expansion of geographic coverage.

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

No

c. Will a split evaluation be undertaken?

No

d. Components

The project included four components:

Component 1: Rehabilitation and Network Expansion (appraisal estimate US\$155.55 million, actual US\$352.47, additional financing US\$171.7 million of which US\$75.7 million were co-financed by Agence Francaise de Developpement (AFD)): This component was to finance engineering and civil works within in Lagos and Cross River State and the restoration of treatment plants and the distribution network in Lagos, as well as dam maintenance and heavy rolling stock for the utilities. In Cross-River state the component aimed to significantly increase metered connections in Calabar city. In addition, the component was to finance the rehabilitation of the water systems in the towns of Ikom, Ogoja and Obudu. The Additional Financing was to finance excess costs of US\$66.7 million in the cities of Ikom and Ogoja due to lack of detailed pre-feasibility planning and exogenous global price increases. Also, the project’s geographic scope to Itigidi, Obubra and Okpoma in Cross River was extended. Additional allocations were made to finance the rehabilitation of two distribution districts in Lagos.

Component 2: Public-Private Partnership Development (PPP) (appraisal estimate US\$7.45 million, actual US\$1.97million,additional financing US\$5.0 million without any AFD co-financing): This component was to finance: (i) the design and tendering of the management contract for the Lagos Treatment Works; (ii) studies and assistance related to ensuring smooth operation by a private operator of that contract and in Cross River State; (iii) fees for the private operator of the Lagos treatment works, and a provision for a private operator expected to manage one secondary-town system in Cross River; and iv) technical and financial auditors to certify the performance of the private operator.

Under the additional financing, the original intermediate result target of piloting a PSP model in one secondary city in Cross River was dropped, while the second target of a private sector contract for the Lagos treatment works was retained in revised form and with additional funding to achieve it by the new closing date.

Component 3: Service Sustainability and Project Management (appraisal estimate US\$14.55 million, actual US\$16.46 million, additional financing US\$4.0 million, without any AFD co-financing): This component was to finance assistance to the utilities to function at increased efficiency and self-sustainability, provision of subsidies for energy and chemicals, support to stakeholder outreach programs, and support for office equipment and the Project Implementation Units.

This component received Additional Financing for Project Implementation Unit (PIU) increased operating



costs, IT equipment and trainings.

Component 4: Institutional Development and Policy Reform (appraisal estimate US\$10.95 million, actual US\$13.32 million, additional financing US\$17 million of which US\$2 million were co-financed by the AFD): This component was to finance expert technical assistance for the utilities and the Federal Ministry of Water Resources (FMWR), staff training, river basin planning and Millennium Development Goals tracking.

The Additional Financing was to support the MDG tracking system, to provide additional support to the Lagos State Water Cooperation (LSWC) and to conduct additional studies on water governance and investment planning in selected states.

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

Project Cost: At appraisal, the project was estimated to cost US\$210.5 million. Actual cost was US\$306.5 million.

Financing: The project was financed by two credits by the International Development Association (IDA); a US\$200 million credit of which 202.87 million was disbursed, due to exchange rate variations, and Additional Financing of US\$120 million, of which US\$103.6 million was disbursed. The project received financing in the amount of US\$77.7 million by the AFD.

Borrower Contribution: The Borrower was to contribute about US\$10 million (5% of total project cost). However, the counterpart funding was subsequently waived by the Bank.

Dates: The project was appraised on April 13, 2005 and effective seven months later on November 15, 2005. The original closing date was June 30, 2011 and the actual closing date was May 31, 2016, i.e. a four years and 11 months' extension. The project was restructured twice:

- On March 31, 2011 the project was restructured to extend the closing date from June 30, 2011 to May 31, 2013 to allow for the initiation of a number of major contracts which had been delayed due to an extended project design period and due to lack of funds caused by cost escalation. It was also to allow for the completion of other on-going contracts. Furthermore, credit proceeds were re-allocated within categories.
- On May 23, 2012 the project was restructured to receive Additional Financing in the amount of US\$120 million. The following changes were made to the project: i) the PDO was modified to include more districts (see section 1 for more details), ii) the project scope was expanded to cover three extra cities (Itigidi, Obubra, Okpoma) making a total of 7 cities in Cross River State; iii) the Results Framework was modified to reflect the new targets; and iv) the closing date was extended from May 31, 2013 to May 31, 2016.

3. Relevance of Objectives & Design

a. Relevance of Objectives

At the time of project preparation Nigeria experienced several significant challenges in its water sector. Service coverage in urban areas was approximately 50%, and rural coverage was estimated at 35% of actual



demand for water supply. Water production facilities were rarely operated to capacity due to broken equipment or lack of power or fuel for pumping. Also, no independent price or service regulation of State Water Authorities at the state or local government level existed. Furthermore, private vendors dominated the large and growing informal market with no regulation of quality or prices, and states lacked the policy, legal, and regulatory environment and expertise to attract and sustain private investment. Finally, water supply was a state responsibility and state governments created the State Water Agencies (SWAs) to manage and operate systems for water service delivery in all urban and some semi-urban areas. State ministries of water were responsible for service delivery in small towns and rural areas within the state. While service provision was entirely in SWA jurisdiction, tariff setting was not, resulting in inefficiencies of SWA in most states and negatively impacting service provision.

The PDOs were in line with the Government's 2004 National Economic Empowerment and Development Strategy (NEEDS) which stated that water supply was a primary focus, set access targets and aimed to re-orientate the SWAs, reform institutional and regulatory frameworks towards more autonomy and increase commercialization and participation of the private sector. Furthermore, Nigeria's economic development strategy vision 2020 emphasizes the importance of sustainable access to potable water and calls for the rehabilitation, construction and modernization of existing water supply and sanitation schemes, distribution networks and facilities for optimal operation. The PDOs were also in line with the Bank's Country Partnership Strategy (2014-17/19) which defined coverage and efficiency of water supply services as key area for Bank engagement and included "improved coverage and efficiency of water supply service in selected states" as a target outcome.

Rating

High

b. Relevance of Design

The project's activities were mostly logically and plausibly linked to achievement of the project's objectives. Activities to improve reliability of water supply produced by the water treatment works in the participating states and increase access to piped water networks included infrastructure investments such as engineering and civil works within Lagos and Cross River State, restoration of treatment plants and the distribution network in Lagos as well as dam maintenance, heavy rolling stock for utilities and increase in metered connections in Calabar city. Activities to improve the commercial viability of urban water utilities in the participating states included assistance to the utilities to function at increased efficiency and self-sustainability, support consumer outreach, obtain better data, provide utility training, and involve the private sector.

While the causal relationships between these interventions and underlying assumptions about how program actions would lead to intended outcomes were logical and properly laid out for most of the project's activities it was not clear for example what the aim of implementing a Millennium Development Goal (MDGs) system was and how it would be sustained after project closing since the PAD did not provide any detailed information. Also, the project design did not include sufficient activities for reforming the sector, which was a critical aspect in the government's NEEDS strategy and the Bank's CPS. Furthermore, the project design did not take exogenous risks such as global price increases and lack of political support for some aspects of the project such as utility autonomy over tariffs reform into account



Rating
Modest

4. Achievement of Objectives (Efficacy)

Objective 1

Objective

Improve the reliability of water supply produced by the water treatment works:

Rationale

Outputs (for the following outputs no baselines or targets were provided, therefore, it is not clear if the outputs were produced as targeted):

- A Treatment Plant with a Production Capacity of 250m³/h operations for 23hrs per day (5,750 m³/day) to serve a total population of about 108,000 persons was constructed.
- A Treatment Plant with a Production Capacity of 250m³/h operations for 23hrs per day (5,750 m³/day) to serve a total population of about 152,500 persons was constructed.
- At least 90,000 water meters were installed, surpassing the target of 55,000 water meters.
- The national utility training plan was developed and implemented by the end of the project, achieving the target.
- Communications and consumer outreach programs were operational in two State Water Agencies by project closing, achieving the original target.
- An additional Treatment Plant of 100m³/h to serve a total population of about 79,994 persons in Itigidi town was constructed. This output was achieved under the restructured project.
- A Water Treatment Plant of 8,600m³/d to serve a total population of about 156,794 persons was constructed in Obubra town. This output was achieved under the restructured project.
- A Treatment Plant with production capacity of 4,150m³/day for 18hrs, to serve a total Population of about 64,116 persons was constructed in Okpoma. This output was achieved under the restructured project.
- A High Lift Pumping station was constructed in Obubra town. This output was achieved under the restructured project.
- 1,000m³ Ground Level Reservoir (Round Steel type) was constructed. This output was achieved under the restructured project.
- The MDG tracking system for access to potable water and sanitation was established and is operational in the Federal Ministry of Water Resources (FMWR), achieving the original target.

Outcomes:

- Lagos treatment plants capacity attributable to the project increased from 60m³/year in 2005 to 200m³/year surpassing the original target of 180m³/year.
- Lagos treatment works operation capacity performed at 81.3% in December 2017, falling slightly short of the original target of 85%.



- While in 2005 the daily water supply in Lagos State was 6 hours, the daily water supply increased to 23 hours in 2017, surpassing the original target of 18 hours. This indicator was added during the additional financing.
- While in 2005 the daily water supply in Calabar/other Cross River state towns was 6 hours, the daily water supply increased to 19.3 hours in Calabar and 17.8 hours in other Cross River state towns, surpassing and very nearly achieving the original target of 18 hours. This indicator was added during the additional financing.

Rating

Substantial

Objective 2

Objective

Increase access to piped water networks in Cross River State:

Rationale

Outputs (if not stated otherwise, the ICR did not provide any targets for the following outputs):

- 50 kilometers of treated water transmission pipelines were constructed.
- 35.10 kilometers of distribution pipelines were built.
- The network for four distribution districts in Lagos was rehabilitated, achieving the revised target of four but falling short of the original target of five.
- Rehabilitation and expansion works of 163.81 kilometers were completed in service area 1 (Lagos Island and Ikoyi) and service area 4 (Ikeja I and II and Oshodi) by May 2016.
- 32.06 kilometers of distribution pipelines in Itigidi Town were constructed.
- 25.6 kilometers of treated water transmission pipelines in Itigidi Town were established.
- 4,720 house connections and 41 kiosks were established in Itigidi town.
- 5,000 house connections and 118 Water Kiosks were established in Obubra town.
- 3,000 house connections plus 75 Water Kiosks were established in Okpoma town.

Outcomes:

- The coverage of the population in Calabar and in other Cross River state towns by existing distribution networks increased from 20% of the population in Calabar and 10% of the population in other towns in 2005 to 54% of the population in Calabar and 23% of the population in other Cross River state towns in 2017, not achieving the original target of 90%.
- In Cross River the number of new piped household connections was at least 74,271 new connections in 2017. In Lagos, the amount of new piped household connections was at least 26,115 new connections in 2017, both totaling 100,386 connections and surpassing the target of 55,000 connections. This indicator was added during the additional financing.
- Rehabilitation works such as major restorations of Adiyari and Iju treatment works, along with the rehabilitation and construction of a number of smaller water works affected at least 35,821 accounts that were active in Lagos as of December 2017. Capital investments also improved supply to at least 75,271



connections in Cross River state. Both totaling 111,092 accounts and surpassing the target of 44,000 households.

- The project benefited more than 1 million beneficiaries (of which 50% were female), surpassing the target of 990,000 beneficiaries.

Rating

Substantial

Objective 3

Objective

Improve the commercial viability of urban water utilities in Participating States:

Rationale

Outputs:

- The original target of one Private Sector contract for the operation of the treatment works in Lagos was not achieved.

Outcomes:

- The billing collection rate of Lagos State Water Cooperation increased from 38% in 2012 to 86% in 2017, surpassing the original target of 80%. This indicator was added during the additional financing.
- The billing collection rate of Cross River State Water Board Limited decreased from 80% in 2012 to 35% 2017, not achieving the original target of 95%. This indicator was added during the additional financing.
- 41.4% of Operation & Maintenance costs were recovered from revenue in Calabar by project end, not achieving the revised target of 100%. This indicator was rephrased during the additional financing.
- 54.4% of Operation & Maintenance costs were recovered from revenue in Lagos, not achieving the original target of 90%. This indicator was added during the additional financing.

Rating

Negligible

5. Efficiency

Economic Efficiency:

The PAD (p. 52) included incremental cost-benefit models with a 15 years analysis period and a 10% discount rate.

For Lagos the model made the following assumptions: The model only included the wholesale (treatment and



bulk transmission) revenue flows but included all the IDA investment, both for treatment works and the five distribution zones. The model assumed that the Lagos Treatment works were to be restored to about 90% of installed capacity from the approximately 33% operational efficiency at the time of appraisal. All the water produced after Unaccounted For Water (UFW) losses were assumed to be sold to the districts at the bulk tariff. UFW in the Treatment Works was also assumed to decrease about eight percent during the project and stay at about that level for the remainder of the analysis period. The ICR did not state whether that assumption materialized. For Calabar City (a sample for Cross-River) the model assumed that 50,000 new household connections, about 300 new commercial and industrial customers, and about 300 new stand posts were to be added.

The model for Lagos estimated a Net Present Value (NPV) of NGA 136 million, a Financial Internal Rate of Return (FIRR) of 10% and an Economic Internal Rate of Return (EIRR) of 13%. The model for Calabar City estimated an NPV of NGA 406 million, a FIRR of 13% and an EIRR of 15%.

According to the ICR (p. 17) the model for Lagos wrongly estimated the incremental expenses based on “incremental water available for sale” instead of “incremental water produced”. If the model had not contained this inaccuracy, the NPV would have been negative. The ICR further stated that several assumptions that were made during appraisal did not materialize. For example, the tariff did not change before the IDA credit was closed. Also, at appraisal it was assumed that non-revenue water was at only 35% at outset and was supposed to decline to 28% by 2014, while IBNET data suggested an actual value of above 50% for non-revenue water at appraisal. Furthermore, billing collection rates were lower than expected and costs were higher than anticipated. Finally, capital investment costs increased across all project components and on a per-output basis than estimated at appraisal. The ICR (p. 18) argues that the original estimation period (2005-19) was too short, especially given the later completion of major works and might have underestimated the financial and economic viability of the project.

The ICR re-estimated the NPV and FIRR resulting in a negative NPV of NGN 8.5 billion and a FIRR of -12% for Lagos and a negative NPV of NGN 871 million and a FIRR of -3.5% for Calabar, indicating that the project was not financially viable within the original timeframe. The ICR (p. 17) stated that the estimations at appraisal only took benefits such as tax payments made by the project into account. However, additional benefits such as gains in productive time due to reduced water fetching distances, lower rates of diarrheal disease and reduced morbidity were not taken into account. Taking these additional benefits into account, the ICR estimated an EIRR for Lagos of 1% and for Calabar of 21.7%.

Operational Efficiency:

According to the ICR (p. 19) the project required Additional Financing due to a lacking detailed pre-feasibility planning, exogenous global price increases and an expansion of project scope rather than inefficient use of project funds. However, the project experienced several implementation delays due to procurement and financial management related issues and weak implementation capacity. Also, by the time the project closed an adequate system for monitoring actual versus budgeted expenditures was still not in place at the federal level, indicating weaknesses in cost-control. In addition, in 2016 the Bank assessed Lagos’ internal controls as weak and lacking internal audits, manual accounting and fixed asset register.

Overall, Efficiency was Modest.

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 relevance of objective is rated High as the objectives were well aligned with both national priorities and Bank strategies at closure. Relevance of design is Modest since exogenous factors such as global price increases and lack of political support for some aspects of the project were not adequately taken into account. Achievement of the first and second objectives is rated Substantial. Achievement of third objective is Negligible. Efficiency is rated Modest. Hence the overall outcome is Moderately Unsatisfactory. Conducting a split rating is not required since the Additional Financing only increased the project’s geographical scope but did not change the type of activities or core indicators.

a. Outcome Rating

Moderately Unsatisfactory

7. Rationale for Risk to Development Outcome Rating

The achieved project development outcomes face several risks.

First, maintenance: the technology of the rehabilitated plants and network is complex and will require continuous maintenance. However, according to the ICR (p. 20) the 2016 Borrower Completion Report pointed out that “poor maintenance culture was allowed to persist”. This issue was addressed by implementing performance improvement programs which included activities such as an assessment of technical and commercial operations, training of utility managers on issues including inventory management, and plant maintenance and non-revenue water reduction. However, the ICR (p. 20) stated that it was difficult to distinguish between effects of such capacity building activities from repairs financed by the project.

Second, cost recovery: since cost recovery remain far below targets in Lagos and Cross River state the financial risk remains significant for utilities. The ICR (p. 21) stated that in Cross River state the cost recovery was below 40 percent in 2016, with a modest trend reversal at project closure. In Lagos, cost-recovery was below 40 percent in 2016 and increased to above 54 percent in 2017. Even though the utilities are on the right track, due to low cost recovery rates their financial vulnerability persists and does not allow them to make autonomous decisions given their financial dependence on state subsidies.

Third, political instability/economic shock: given the utilities’ financial dependency on state subsidies, political



changes remain a direct risk and impact the utilities' income and management stability. According to the ICR (p. 21) poor maintenance, low cost-recovery and political instability have negatively impacted performance in the past as in 2015-2016 when lack of maintenance impacted plant capacity and irregular payments for power and political instability disrupted the supply of energy.

a. Risk to Development Outcome Rating

Substantial

8. Assessment of Bank Performance

a. Quality-at-Entry

The project design was built on lessons learned from earlier operations and analyses conducted by the Bank on strategic sector challenges which resulted in the project focusing on two relatively well-performing states to create reform models that can be replicated in other states. According to the ICR (p. 5) the Bank consulted with a variety of stakeholders during project preparation. A communication audit and media campaign were conducted to address concerns about Public Sector Partnerships (PSP).

The Bank identified relevant risk factors. The risk of constraints in the availability of electricity to make full utilization of restored or new investments impossible was the only risk rated Substantial and still underestimated and lacking adequate mitigation measures. Risks such as lack of utility autonomy, hesitance by the private sector to engage, civil work delays and financial management were underestimated and turned out to be much more substantial than anticipated. According to the ICR (p. 7) other risks such as the underdeveloped legal framework, infrastructure delays, lack of interest by POs for marginal systems, resistance from public-sector unions, opposition by Non- Governmental Organizations (NGOs) and a lack of political commitment were not sufficiently identified, and inadequate mitigation measures resulted in significant implementation challenges.

The ICR (p. 7) stated that the start of implementation was delayed by almost a year due to the late availability of feasibility studies, SPIU capacity constraints, staff turnover, and political-economic challenges. Significant project activities in Cross-River could only start in 2008 since the final studies were only received in November 2006.

Furthermore, M&E design had several shortcomings such as lacking baseline data, overly ambitious targets and complex institutional arrangements (see section 10a for more details).

Quality-at-Entry Rating

Unsatisfactory

b. Quality of supervision

The Bank team had the required sector expertise and conducted 21 supervision missions of which 12 missions produced Aide-Memoires. According to the ICR, supervision missions were not documented in Aide Memoires for four fiscal years. According to the ICR (p. 22) Implementation Status Reports (ISRs), Aide-



Memoires and the Mid-Term Review demonstrate the Bank's focus on development impact. Also, the Bank pointed out implementation bottlenecks in project management. The Bank addressed issues in procurement and financial management by supporting training programs for the utilities and PIU. The Bank team also developed action plans for the PIUs with clear targets and requests on issues such as budgeting, accounting, internal controls, flow of funds and financial reporting to guide the PIUs towards improvements. According to the Bank team (June 13, 2018), the Bank highlighted M&E issues at an early stage to the client. To improve M&E the FPIU facilitated trainings and in 2016 put in place an online M&E platform for SPIUs to upload and track M&E data though with limited results. Hiring the external performance improvement consultancy firms to support both utilities in the final year of the project also improved M&E. However, while the Bank was successful in obtaining Additional Financing for the project and the restructuring was used to make important modification to the project Results Framework, the Bank did not set more realistic targets for commercial viability even though shortcomings in the achievement of this PDO had been identified in previous ISRs. The project experienced a high turnover of Task Team Leaders (TTLs) with five different TTLs over the project duration According to the ICR (p. 22) Bank supervision improved during the last 18 months of project implementation.

Quality of Supervision Rating

Moderately Unsatisfactory

Overall Bank Performance Rating

Unsatisfactory

9. Assessment of Borrower Performance

a. Government Performance

The project was supported by three levels of government; the federal government, the state level government in Lagos and the state level government in the Cross River State. According to the ICR (p. 13) cooperation was effective between various government entities such as the FMWR, the Federal Ministry of Environment, the River Basin Development Authority, the State Environmental Protection Agencies and the Federal Ministry of Finance. The ICR stated that some project achievements such as the creation of a State Water Regulatory Commission and Office of the Public Private Partnerships in Lagos demonstrated the government's commitment to the project's agenda. However, the ICR also identified a few shortcomings in government performance. First, the government did not make the planned contribution of US\$10.5 million which was substituted by Additional Financing to avoid a negative impact on project implementation. Second, the project experienced an excessive staff turnover due to the government's interference on project staffing resulting in instability and implementation delays. And finally, changes in government resulted in sudden amendments of disbursement rules at the state level in 2015, causing implementation delays.

Government Performance Rating

Moderately Satisfactory



b. Implementing Agency Performance

The Federal Project Implementation Unit (FPIU) was responsible for the overall oversight of project implementation, project activities related to dam, national policy reform, training, a water resource initiative and the MDG tracking system. State Project Implementation Units (SPIUs) were responsible for the implementation of state-level components. According to the ICR (p. 23) the FPIU implemented activities related to the dam and capacity building in a timely manner. The FPIU's monitoring activities and communication with SPIUs were weak. According to the ICR (p. 7) SPIUs were initially not familiar with Bank procurement standards. While the performance of the SPIU in Cross River State was commended by the Bank from early on (ICR p. 23), the SPIU in Lagos faced several challenges such as capacity constraints and staff turnover (five different project coordinators), serious financial management and procurement issues including ineligible expenditures and over-commitments. The ICR (p.7) stated that the capacity constraints and high staff turnover were among the factors that resulted in a one year delay of implementation start.

According to the ICR (p. 24) implementation performance improved significantly in the final project phase.

Implementing Agency Performance Rating

Moderately Unsatisfactory

Overall Borrower Performance Rating

Moderately Unsatisfactory

10. M&E Design, Implementation, & Utilization

a. M&E Design

The objectives of the project were clearly specified. The Results Framework included relevant indicators to measure improvements in the reliability of water supply, access to piped water networks and commercial viability of urban water utilities. However, even though the project had a strong focus on reforming the water sector (as indicated by the name of the project) and component 4 focused on institutional development and policy reform, the Results Framework did not include any PDO or Intermediate Outcome indicators to measure this aspect of the project. Therefore, the theory of change and how key activities and outputs would lead to intended outcomes were only partially reflected in the Results Framework. In addition, the Results Framework did not capture two policy improvements that were achieved under the project such as the establishment of a regulatory institution in Lagos and the development of a water resources policy. Also, indicators to measure the quality aspect of institutional development such as number of utility staff trained and improving consumer outreach were not included in the Results Framework. Other indicators to measure improvements in institutional development lacked precise targets and a detailed definition such as the indicators to measure the implementation of a national utility training plan, implementation of communications and consumer outreach programs, and implementation of a Millennium Development Goal (MDG) tracking system.

Since the completion of detailed baseline data was delayed, many Intermediate Outcome Indicators lacked a baseline. According to the ICR (p. 5) this resulted in the formulation of unrealistic targets and under-estimation of funding needs. Furthermore, the M&E reporting design was overly complex. While



the FPOU was responsible for the overall supervision of M&E, the SPIUs were in charge of obtaining data from the technical units within the utilities. The Project Financial Management Units (PFMU) within the Finance and Accounts Department of the LSWC in Lagos and within the Sate Accountant General's Office in Cross River State, oversaw the financial monitoring of the project. This complex multi-tier structure resulted in communication and supervision gaps.

b. M&E Implementation

When the project received Additional Financing in May 2012 the Results Framework was modified to measure outcomes across both states more precisely. In addition to measuring reliability by realized plant capacity an indicator was added to measure hours of supply. Also, access extension was not only measured by new active connections but also by overall number of beneficiaries. In addition, indicators on cost-recovery and bill collection measured two critical aspects of commercial viability gains made through higher capacity and new connections.

However, M&E implementation had several shortcomings. According to the ICR (p. 9) the SPIUs initially did not consider M&E activities to be important and the FPIU in Abuja was too remote to verify field reports. Even after the project received Additional Financing the Bank found that the M&E was not being implemented as required, resulting in a downgrading of the M&E rating to Moderately Unsatisfactory in an Implementation Support Report (ISR). The ICR (p. 9) stated that even though M&E was improved during the final implementation years, data remained unclear and varying data for the same indicators was presented in different reports throughout the implementation period, making the assessment of progress towards the target challenging. The FPIU tried to address this issue through conducting trainings and putting an online M&E platform in place to support SPIUs in uploading and tracking data. However, the quality and reliability of data remained a challenge until the closure of the project. The ICR noted that the project's M&E functions and processes were of only modest quality even during the project, therefore systematic improvements are unlikely.

c. M&E Utilization

According to the ICR (p. 10) M&E utilization was limited at the beginning of implementation as demonstrated by the missed opportunity to modify the targets for cost recovery to a more realistic level during project restructuring. At the final stage of implementation, M&E was used to inform decision making and providing information for follow-up analyses.

M&E Quality Rating

Modest

11. Other Issues

a. Safeguards



The project was classified as category B and triggered the Bank's safeguard OP/BP 4.01 (Environmental Assessment), OP/BP 4.12 (Involuntary Resettlement), OP/BP 4.37 (Safety of Dams), and OP/BP 7.5 (Projects on International Waterways).

Environmental Assessment: The project developed an Environmental and Social Management Framework (ESMF) and conducted site specific Environmental and Social Impact Assessments. The ICR (p. 10) stated that compliance with the Bank's safeguard was moderately satisfactory since there were some delays and inconsistencies in the preparation, disclosure and compliance with site specific safeguard measures due to the lack of a dedicated safeguard officer in Cross River and Lagos.

Involuntary Resettlement: The project developed a Resettlement Policy Framework (RPF) and site-specific Resettlement Action Plans. In February 2017 works were briefly suspended due to delays in paying people affected by the project in Lagos but resolved by April 2017 so works were taken up again.

Safety of Dams: The project produced a dam safety report and a dam safety and remedial study for the Obudu Dam which was financed by the project. The ICR (p. 10) stated that no irregularities or violations were recorded.

Projects on International Waterways: The ICR (p. 10) stated that, as required, a formal riparian notification was sent to the government of Cameroon in March 2005.

b. Fiduciary Compliance

Financial Management:

According to the ICR (p. 10) the project experienced several Financial Management challenges such as low-quality audits, error prone and delayed payment processing, and lacking counterpart funds. The Bank team stated that the project partially complied with the Bank's financial covenants (not in Lagos). The ICR (p. 58) stated that the external audit for 2015 was assessed as "less than satisfactory as most figures in the report did not reconcile with any of the financial records in the project". According to the Bank team the 2017 Fiscal Year Financial Management Review for the FPIU noted that "a clean audit opinion was expressed by the external auditors". In addition, the external audits (Lagos and Cross River, all three credits) for the year up to December 2016 were not qualified. The project overcommitted funds and expenditures in the amount US\$200,000 had to be declared ineligible for financing by the project.

Procurement:

The project experienced several procurement challenges. According to the ICR (p. 11) the Federal Project Implementation Unit (FPIU) performed its procurement role satisfactorily. However, the project experienced several implementation delays due to the weak procurement performance at the state-level, poor quality of bidding documents and evaluation reports. Bank supervision missions identified issues such as unretired advances, inadequate documentation and unavailable payment vouchers (particularly in Lagos). Furthermore, even though the project tried to build procurement capacity through conducting trainings, the impact of these efforts was limited due to high staff turnover. Also, procurement suffered from the lack of a computerized accounting system until 2015 at FPIU level and until project closure in Lagos. According to the ICR (p. 11) no fraud and corruption issues were identified during project implementation. The ICR also stated that the project's procurement performance improved towards the end of project implementation.



c. Unintended impacts (Positive or Negative)

NA

d. Other

12. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Moderately Unsatisfactory	Moderately Unsatisfactory	---
Risk to Development Outcome	Substantial	Substantial	---
Bank Performance	Moderately Unsatisfactory	Unsatisfactory	Significant shortcomings in ensuring quality at entry such as underestimation or lack of identification of several risk factors, inadequate mitigation measures and several weaknesses in M&E design.
Borrower Performance	Moderately Unsatisfactory	Moderately Unsatisfactory	---
Quality of ICR		Substantial	---

Note

When insufficient information is provided by the Bank for IEG to arrive at a clear rating, IEG will downgrade the relevant ratings as warranted beginning July 1, 2006.

The "Reason for Disagreement/Comments" column could cross-reference other sections of the ICR Review, as appropriate.

13. Lessons

The ICR (p. 24-28) provided useful lessons learned, adapted by IEG:

- **For sector reforms to be successful, it is critical to design a reform agenda that includes realistic intermediate steps and for the project design to directly address political economy constraints and stakeholder incentives.** In this project, legitimate stakeholder incentives such as political resistance to tariff increases prior to service improvements were not adequately reconciled with project goals such as achieving high cost-recovery targets. Furthermore, financing was not linked to reform progress but mainly to implementation of infrastructure works, signaling that reform progress is secondary. Linking financing to activities related to reform could realign incentives and improve outcomes.
- **Pro-actively managing government support to sustain buy-in and mitigate government dynamics**



throughout implementation is critical. In this project, even though government buy-in was ensured at appraisal, it was not sustained throughout implementation due to changes in key stakeholders. This resulted in lack of support for key activities such as PSP, increased risks of consistent energy supply since the utilities rely on the government for subsidies, and disrupted implementation due to high staff turnover at the PIU. Therefore, implementing a continuous and pro-active communication strategy which targets key stakeholders at local, regional, and national level is critical.

- **Commonly used Bank indicators on gender should be defined in a more meaningful way.** In this project, the target of “50% of female project beneficiaries” was achieved since in Nigeria women make up half of the households. However, this indicator does not measure the project’s impact on women in a meaningful way nor does it provide any valuable information or incentives gender specific actions.

14. Assessment Recommended?

No

15. Comments on Quality of ICR

The ICR provides a good overview of project preparation and implementation and is sufficiently candid about implementation challenges. The ICR includes an adequate Economic analysis and is outcome driven. The ICR lacks information in critical areas such as amount and type of outputs financed by the project, Bank supervision and Financial Management. A highlight of the ICR are the interesting and useful lessons learned.

a. Quality of ICR Rating

Substantial