



Report Number : ICR00004443

1. Project Data

Project ID P120005	Project Name GH:Gas and Oil Capacity Building Project	
Country Ghana	Practice Area(Lead) Energy & Extractives	Additional Financing P148224,P148224
L/C/TF Number(s) IDA-48470,IDA-55220	Closing Date (Original) 30-Jun-2015	Total Project Cost (USD) 55,137,478.19
Bank Approval Date 20-Dec-2010	Closing Date (Actual) 31-Dec-2017	
	IBRD/IDA (USD)	Grants (USD)
Original Commitment	38,000,000.00	0.00
Revised Commitment	57,747,069.90	0.00
Actual	55,137,478.19	0.00

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2. Project Objectives and Components

a. Objectives

The Project Development Objective, as cited on p.4 of the Financing Agreement (FA), was “to support the Recipient’s efforts to (i) improve management and regulatory capacity while enhancing transparency; and (ii) strengthen local technical skills in its emerging oil and gas sector”.

The project was restructured in June 2014, when additional financing was provided. The PDO however remained unchanged.



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

c. Will a split evaluation be undertaken?

No

d. Components

A. Institutional Development and Sector Management: (estimated cost at appraisal: US\$25.8 million, financed by IDA, with parallel technical assistance and training from Norway and USAID; revised at restructuring to US\$27.5 million; actual costs: US\$26.8 million)

Sub-component A.1: *Resource Management* (US\$7.8 million IDA, revised to US\$10.5 million; actuals: US\$10.6 million)

This sub-component supported the development of technical capacity of (a) the Ministry of Energy (MoE), for management of the petroleum sector, including refurbishing of the Ministry's offices, and (b) the Petroleum Commission, to assume its role as industry regulator. Primary activities included upgrading of office environment, staff training, hiring of advisors and provision of external expertise.

Sub-component A.2: *Data Management* (estimated cost at appraisal: US\$10 million, revised to US\$7.5 million; actuals: US\$7.2 million)

This sub-component supported the development of a National Data Repository (NDR) to provide secure electronic data storage capacity for loading data on petroleum exploration and production operations, and associated equipment in an appropriate Ghana National Petroleum Corporation (GNPC) facility to house the NDR.

Sub-component A.3: *Environmental Management* (estimated cost at appraisal: US\$4 million, revised to US\$5.1 million; actuals: US\$5.3 million)

This sub-component was designed to support the Government in managing environmental aspects of petroleum development in accordance with international standards, by strengthening capacity of the Environmental Protection Agency (EPA).

Sub-component A.4: *Revenue Management* (estimated cost at appraisal: US\$1 million, revised to US\$2.7 million; actuals: US\$2.3 million)

This sub-component supported strengthening the capacity of the Ministry of Finance and Economic Planning (MOFEP) and the Ghana Revenue Authority for revenue management, including tax



administration and fund management of oil revenues, through acquisition of goods, provision of training and technical advisory services.

Sub-component A.5: *Enhancing Sector Governance* (estimated cost at appraisal: US\$3.0 million, revised to US\$1.7 million; actuals: US\$1.4 million)

This sub-component aimed to strengthen the institutional arrangements for governance of the oil and gas sector, with a focus on transparency and accountability in the sector. Activities were aimed to help the sector manage expectations, seek feedback, build consensus, ensure supply of timely, reliable and accessible information, and strengthening transparency and accountability mechanisms.

B. Education and Skills Development (estimated cost at appraisal: US\$10.7 million, revised to US\$27.3 million; actuals: US\$25.3 million)

Sub-component B.1: *Vocational Training Support* (estimated cost at appraisal: US\$4.7 million, revised to US\$13.5 million; revised to US\$12.0 million)

This sub-component was designed to strengthen the capacity of Ghanaian training institutions, including *Kikam* Technical Institute, *Takoradi* Technical Institute and the Royal Maritime University, to enhance the skills of the local workforce to engage in the oil and gas sector. It included training to staff of these institutions, curriculum development and upgrade of facilities in the training schools.

Sub-component B.2: *Tertiary education and research support* (estimated cost at appraisal: US\$6 million, revised to US\$13.8 million; actuals: US\$13.3 million)

This sub-component was designed to strengthen the capacity of Kwame Nkrumah University of Science and Technology (KNUST) to provide high-level degree programs in petroleum engineering and petrochemical engineering. Activities were aimed at improving the quality and range of courses, by strengthening college faculty, enhancing student learning experience by equipping new laboratories, providing text books, journals and other teaching materials, facilitating graduate students to extend postgraduate masters and doctoral programs, so as to add to the staff of the university, and facilitating visiting faculty lecturers. It was anticipated that some 300 students in petroleum engineering would be trained at KNUST in this way using the laboratory.

C. Project Supervision (estimated cost at appraisal: US\$1.5 million, revised to US\$2.9 million; revised to US\$2.7 million)

This sub-component supported the Project Coordination Unit (PCU) in its role of coordinator and manager of the Project. It aimed to enhance the PCU's capacity for procurement and financial management, through provision of technical advisory services, training, operating costs and acquisition of goods. During the 2014 restructuring, these components remained unchanged.

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

Project Cost: The project went through a Level 1 restructuring and Additional Financing (AF) in June 2014. The AF was designed to cover shortfalls arising from major cost overruns on laboratories,



workshops and training equipment in Sub-components A.3 (EPA), B.1 (Vocational schools) and B.2 (KNUST). The final project cost amounted to US\$57.8 million up from US\$38.0 million at appraisal, of which US\$55.13 million were actually disbursed.

Financing: The sources of funding for this project at appraisal consisted of IDA resources of US\$38.0 million at appraisal, augmented by parallel financing of US\$15 million from Norway and US\$2 million from the Governance Partnership Facility. An additional US\$ 19.8 million of IDA funding was made available through the AF in 2014.

Borrower Contribution: A borrower contribution of US\$3 million was originally envisaged for this project at appraisal, though no funding was actually provided during the life of the project.

Dates: The project was originally envisaged to close on June 30, 2015. However, the closing date was extended by two years at the time of the June 2014 restructuring. This was further extended by 6 months, to December 31, 2017. From project approval in December 2010 to project closing in December 2017, the project took 7 years to complete.

3. Relevance of Objectives

Rationale

The project was prepared a few years after the discovery of major oil and gas deposits in waters off the coast of Ghana, which created the urgent need to develop local capability and technical skills to be able to manage this nascent industry. Additionally, the Government's capability to set policy and oversee this industry was being built up virtually from scratch - which made the PDO fairly ambitious, bearing in mind these (and related) capacity limitations. The objectives of the project at appraisal were consistent with the focus of the World Bank's Country Assistance Strategy (adjusted in 2010, to take account of the discovery of oil and gas resources) and the Government's subsequent medium-term Development Policy Framework (2010-13), one priority of which was to ensure the judicious use of oil revenues through sound legislation and strong institutions that would bring about effective, transparent and accountable use of these new resources. These objectives remained consistent with the Government of Ghana's most recent Country Partnership Strategy (CPS), FY13-FY16, which recognized [see page ii] that "Ghana's growth and development prospects, at least over the next decade, will be strongly underpinned by the petroleum sector and the policy responses to the increased fiscal revenues from oil". This, in turn, called under Pillar 1 for measures to help enhance natural resource governance, including for greater transparency in the oil and gas sector, reflected through steps to make oil and gas contracts available to the public. This was based on the recognition that "Ghana's natural resources, both renewable and non-renewable, can drive economic growth and poverty reduction if they are managed sustainably". Early indications are that the mining and oil sectors, which grew at 46.7 percent and 80.4 percent, have had a positive impact on overall growth of the economy, which increased by 8.5 percent in 2017, against only 3.6 percent the previous year.



Rating
High

4. Achievement of Objectives (Efficacy)

Objective 1 **Objective**

“To improve management and regulatory capacity while enhancing transparency”.

Rationale

Theory of Change:

The PAD does not discuss the project's theory of change. Its Annex 1 presents the project's Results Framework, which contains year-by-year targets for the intermediate and final outcome indicators. Actions and specific percentages are also delineated; however, the Results Framework does not analyze causality and attribution, which a credible theory of change would require.

The ICR does present the project's theory of change, with a diagrammatic description of the results chain, indicating the linkages between activities and outputs, and between outputs and outcomes. A direct causal link can be drawn between the project's activities, which included training in technical, financial and managerial aspects of the industry, skills development and training of trainers, office construction and procurement of IT and office equipment, as well as workshop and laboratory equipment, and the expected outcomes in terms of improved public management and regulatory capacity while enhancing transparency, and the strengthening of local technical skills. These in turn would be linked to long-term outcomes via the revenues generated by the oil and gas industry in supporting a new growth strategy for Ghana that would help substantially raise its income levels. That said, a rigorous theory of change would require an analysis of whether the projects activities were the most appropriate ones (i.e. that other important activities were not neglected) as well as whether they were of an adequate scale and timing, which this analysis does not specifically undertake. For instance, when translated into results indicators, the success of some of the project's interventions was measured in the number of training courses offered and completed by staff, without any measure of standards of accomplishment attained by the staff taking the courses.

Outputs:

The following intermediate outcomes were achieved.

- Oil and gas contracts made available to the public
- Ministry of Energy (MoE) offices upgraded, including modern IT systems and communications management
- Offices of future regulator (Petroleum Commission of Ghana) outfitted



- Petroleum data managed in modern National Data Repository (NDR)
- 100 percent of seismic data transcribed to digital format
- Annual Reports on Petroleum Fund, as well as semi-annual publications, published on time
- Environmental Protection Agency (EPA) equipped to monitor and respond to environmental concerns
- A number of EPA staff trained (28 trained, which was slightly less than the target of 30)
- Number of unique users (not counting repeat) per month (289) of the independent Information Resource Center exceeded target (250)
- Regular supply of communication from public sector on oil and gas issues, as measured by number of unique visitors per month on MoE website (1617) in excess of target (1000)

Outcomes:

The project was largely successful in building substantial regulatory capacity at the Petroleum Commission. The Commission, which did not exist at the outset of the project, was established and grew into an effective institution discharging the functions of an oil and gas regulator, such as issuing of licenses for exploration, development, drilling and production, maintaining and disclosing public records on petroleum agreements, exploration and development, and supervising operators' and contractors' adherence to health, safety, security and environmental standards. This was the result of a focused effort under the project to build physical, human and institutional capacity, by equipping the Commission, training its staff (57 staff trained, in excess of the target of 47) and transcribing processed data for the National Data Repository. In addition, the project achieved its objective of providing its planned number of core curriculum courses to staff of the Ministry of Energy, as part of an effort to build technical capacity in one of the key management institutions in the sector.

There is also evidence that the project, which supported the Oil & Gas Unit within the Ministry of Finance (MoF) through office equipment, training and consultancies, was successful in promoting a degree of transparency in oil and gas revenue management. Aided by these interventions, the Oil & gas Unit has published Quarterly Petroleum Receipts and Distribution Reports showing details of volume and price of each cargo sold from each field, as well as of royalty receipts, income tax receipts and lease rental data. Since 2012, the Oil & Gas Unit has also published Annual Reports on the Petroleum Funds, summarizing the quarterly revenue reports and providing detailed information on deposits into and withdrawals from the revenue stabilization fund and intergenerational heritage fund - a level of detail not found in any other African country (ICR, p.18).

The project was less successful as regards the objective of building up the capacity of the EPA. The Analytical Laboratory at the EPA office in Sekondi, which was envisioned as a basic facility for analyzing near-shore water quality near fishing villages, did not become accredited and fully operational by project closing. This was in part the result of a decision by the EPA and the World Bank, during implementation, to upgrade specifications so that the laboratory would be able to provide commercial services to the industry. This resulted in a cost overrun and implementation delays. Even after the laboratory was delivered and installed, the EPA's failure to procure lab consumables on a timely basis resulted in a delay of almost a year to its commissioning. Though the laboratory was up and running by project closing, some doubts lingered as to its sustainability, as additional costly equipment is likely to be needed for it to operate on a fully



commercial basis. Also affecting the EPA's ability to conduct marine shoreline work was lack of clarity regarding planned and actual use of the surveillance vehicle that was acquired for monitoring water quality. It is not clear whether the EPA will be able to provide sufficient funding for fuel, insurance and maintenance of the vessel which was currently being operated by the Ghana Navy.

Based on the above, efficacy of this objective is rated Substantial.

Rating
Substantial

Objective 2

Objective

“To strengthen local technical skills in its emerging oil and gas sector”

Rationale

Outputs:

The following intermediate outcomes were achieved:
(Tertiary Education):

- Construction and equipment of 21 workshops and laboratories at Kwame Nkrumah University of Science & Technology (KNUST), Kikam Technical Institute (KTI), Takoradi Technical Institute (TKI) and Regional Maritime University (RMU). These included improved fundamentals laboratories for foundation courses in petroleum engineering and petrochemical engineering, and an international standard lab for petroleum and petrochemical engineering at KNUST, as per target.
- Appointment of requisite number (10) of faculty in petroleum engineering
- Faculty development activities took place: 16 staff received training, including MSc degrees for 7, and on-going PhD coursework for 4 (no targets available).
- Lab technicians hired, and operating budget for the laboratories provided by KNUST (legal covenant).

The following intermediate outcomes were only partially achieved on account of persistent implementation delays and cost overruns:

(Vocational Training):

- KTI and TTI were able to offer courses in technical training (mechanical, welding and fabrication) for oil & gas, though well behind schedule. RMU reportedly also offered courses, but information on content is lacking.
- 80 students at KTI and 158 at TTI completed training in petroleum engineering, on target but behind schedule and with not all labs in use.

Outcomes:



The project was partially successful in strengthening local technical skills in the oil & gas sector. At close of project, the number of students completing vocational courses in labs/workshops funded by the project, in skills relevant to the oil & gas sector (238), fell far short of targeted levels (which - at 530 - had themselves already been drastically cut back during the 2014 restructuring to less than half the original values). In comparison, tertiary education showed better results, with nearly 294 students at KNUST (against a target of 300) completing training in petroleum engineering and petrochemical engineering. At issue were the various delays that had been encountered at all stages of the vocational training activities, ranging from poor performance by the consultant hired to develop specs for the equipment, higher-than-expected costs of equipment, compared to estimates made during appraisal (which resulted in procurement activities being shut down for a year until the project received additional financing), and mismanagement of the space originally allocated for the equipment. Also, KTI, TTI and RMU (and their supervising agency COTVET) did not pay sufficient attention to development of curricula and business plans for assuring utilization of equipment, certification and training of trainers. By project closing, all 21 laboratories/workshops planned were complete, but this happened so late in the timeline that not all of them were operational enough to be imparting training. As such, training outcomes were somewhat lopsided, with KTI and TTI producing results only in the welding and mechanical labs, and RMU reporting zero results. The late completion of the labs and workshops raised questions regarding long-term sustainability of the facilities as availability of funding for instructor training, certification, curriculum development and equipment maintenance, was no longer assured (KNUST would be less affected, being a largely self-funded institution).

Based on the above, efficacy of this objective is rated Modest.

Rating
Modest

Rationale

Overall Efficacy

The main outcomes of the project were the achievements in building regulatory capacity at the newly established Petroleum Commission, which enabled it to begin discharging the functions of an oil & gas regulator, as well as promoting a degree of transparency in oil and gas revenue management. This was a key objective of the operation. This success was however diminished to some extent by significant delays in building capacity at the EPA, though the analytical laboratory was up and running by close of project. The project broadly met its objectives in strengthening skills in tertiary education, but was only partially successful in the building of vocational skills. Based on this, and taking into account slightly higher weightage at least in the short run - in favor of PDO1, the project is rated Substantial for overall efficacy.



Overall Efficacy Rating

Substantial

5. Efficiency

Administrative and Operational Efficiency:

The project's efficiency was impacted negatively by delays in implementation and cost overruns in some areas. As mentioned in Section 4, the cost of equipment for the vocational training component significantly exceeded appraisal estimates, while the installation and operationalization of the workshop and training facilities at KTI, TTI and RMU saw major delays. Similar delays were observed in the installation of equipment for the National Data Repository (NDR), partly because the Ghana National Petroleum Corporation (GNPC) and the Petroleum Commission were slow to reach an agreement on where to house the NDR, and how it should be staffed. This was compounded by further delays on account of structural defects discovered in the facility intended to house the NDR and delays in setting up activities and procedures necessary for operationalizing the equipment. The Additional Financing provided by the World Bank to fund the cost overruns was in turn delayed by almost nine months, on account of delayed approval by the Ministry of Finance, as a result of which project implementation was brought to a virtual standstill.

Economic and Financial Efficiency:

As this was a technical assistance operation, no economic analysis was conducted either in the PAD or the ICR. The PAD mentioned that the project was expected to enhance the Governments ability to manage the country's oil resources, thereby increasing the likelihood that economic benefits from them would be realized; but no attempt was made to quantify either these, or any financial, benefits.

Taking account of the cost overruns experienced by the project after effectiveness, necessitating an Additional Financing to cover them, and the various delays in implementation of several components, which had the potential to undermine sustainability, the project's efficiency is rated 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
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* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome

The relevance of the project's objectives to the strategies of the Government, as well as of the Bank, is rated as High, and continues to be so. The achievement of PDO1 is rated Substantial, based on the project's success in establishing an effective regulatory system coupled with transparency. The achievement of PDO2 is rated Modest. The overall efficacy rating is Substantial, given the overall importance of PDO1. Efficiency is rated Modest on account of shortfalls in administrative and operational efficiency. Taking all of this into account, the overall project outcome rating is Moderately Satisfactory.

- a. **Outcome Rating**
Moderately Satisfactory

7. Risk to Development Outcome

Most of the risks to development outcomes achieved by the project relate to sustainability. Although the project's various activities were completed by (extended) project closing, delays in implementation meant that for some activities, such as Environmental Management, that were completed relatively late in the day, arrangements could not be made to assure them of funding for instructor training, certification, equipment maintenance and consumables. At closing, certification of the EPA laboratory was months away from completion, and no equipment maintenance contract was in place. It was also not clear whether the laboratory could operate on a commercial basis until costly additional equipment was purchased for which no budget was immediately available. A great deal would hence depend upon the availability of future funding support for these activities. To mitigate these risks, RMU, TTI and KTI were placing high priority on establishing long-term alliances with industry. With support from DfID, TTI and KTI established a Technical Centre of Excellence to act as a liaison between themselves and industry, and RMU established an alliance with Seaweld Engineering Ltd., a leading international welding and fabrication company. Sustainability risks at KNUST appear to be less serious as this institution is largely self-funded, and its management has focused on developing internationally-recognized curricula, faculty and accreditation.

On the positive side, risks relating to the key regulatory institutions supported by the project appear to be under control. These institutions, especially the Petroleum Corporation, have been performing their roles effectively. Ghana is EITI (Extractive Industry Transparency Initiative) compliant and the Ministry of Finance has developed a track record of reporting oil revenue. As such, there seems little risk that the government will reduce its



commitment to them or allow the progress made in terms of transparency and sector governance to be diluted in the foreseeable future.

8. Assessment of Bank Performance

a. Quality-at-Entry

The ICR does not provide any details on the preparation of the project; however, the design of the project was relatively straightforward and, on the face of it, appropriate to the country's needs. At the time of appraisal, Ghana was on the verge of a massive transformation, following the commercial discovery of oil and gas. Since it had earlier no need to develop any local capability in oil and gas production until then, there was an acute shortage of technical skills at levels adequate to build and run this nascent industry. Consequently, the project was fairly ambitious in its scope, perhaps excessively so, given the internal capacity limitations of the implementation and beneficiary institutions. The various activities under the project required as many as 14 beneficiary agencies to implement them. Many of the agencies, particularly the vocational training schools, were unprepared to manage the activities under their purview, which led to the various major delays in implementation and risks to the sustainability of the project's development objectives discussed earlier. These weaknesses were clearly not identified during project preparation.

Another issue was the design of the results framework, which incorporated indicators relevant all elements of the PDO, but which focused more on capturing completion of various courses (i.e. outputs) than on attainment of actual capacity (outcomes). No objective indicators were introduced, even after restructuring, to assess whether the various courses were of adequate quality and whether they succeeded in actually equipping the staff being trained to function at a higher level of efficiency.

The implementation arrangements envisaged at appraisal for the project appeared to be adequate in the context of fiduciary, M&E, disbursement and procurement arrangements. Since initial assessment indicated that the Ministry of Energy (MoE) did not have any understanding of IDA disbursement and financial management (FM) procedures, fiduciary arrangements were proposed to be undertaken through the Project Coordination Unit (PCU), with additional staff to be provided from the MoE to help in building capacity.

Key project risks were for the most part correctly identified at appraisal, and mitigation measures indicated; however, the risk of inadequate capacity of beneficiary institutions in FM and procurement was seriously underestimated - with consequences to the project's long-term sustainability.

Quality-at-Entry Rating
Moderately Unsatisfactory



b. Quality of supervision

The ICR does not provide any details of the number of supervision missions conducted or adequacy of supervision inputs, including details of whether the TTL or any project team members were field-based. However, the ICR does note that a total of 12 Implementation Status and Results Reports (ISRs) were archived during the seven years of project implementation, and that Aide Memoires were fairly detailed in identifying implementation challenges and suggesting actions for dealing with them. Also, input from the team indicated that 13 formal supervision missions were undertaken during the period of implementation, in addition to several missions for other projects, which facilitated continuing oversight of the current project. A Mid-term Review was held in April 2014, which identified the need to restructure some of the projects results indicators. This was done during the processing of the additional financing that followed. The ICR also indicates that during project supervision, the team provided considerable attention to coordinating the various beneficiary organizations and development partners, regularly reporting on activities and paying attention to budgets and disbursements.

Quality of Supervision Rating

Satisfactory

Overall Bank Performance Rating

Moderately Satisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design

The design of the M&E framework reflected the results chain and incorporated indicators measuring all elements of the PDO. The results framework was fairly detailed; however, an important weakness was that many of the key indicators were expressed in terms of courses taken and completed (i.e. outputs), rather than actual capacities attained. The intermediate indicators themselves adequately captured completion of the project's main activities, and additional indicators were added at restructuring, to measure progress on data transcription, which had been omitted from the original framework.

b. M&E Implementation

Monitoring of the project was handled by the PCU, in conjunction with the Policy, Planning, Monitoring & Evaluation (PPME) Directorate of the Ministry of Energy (MoE). The PCU collected status reports on a quarterly basis from the beneficiary organizations, and compiled them into quarterly reports focusing on the



projects indicators and general progress. Though the PPME was supposed to have undertaken joint responsibility for M&E activities, its knowledge of the project was limited, which constrained its effectiveness in monitoring the project. As a result, the PCU ended up assuming most M&E responsibilities, in addition to its full load of project implementation responsibilities. This loading of M&E responsibilities on the PCU had the consequence of encouraging a somewhat narrow approach to the collection of data for M&E purposes. It should be noted that the MoE's Project Completion Report (cited in Annex 4 of the ICR) mentioned a number of shortcomings in its internal M&E processes, in particular relating to the PPME Directorate's failure to have played a more active role in designing and implementing the project's M&E framework.

c. M&E Utilization

The implementation progress reports shared with World Bank supervision teams proved useful in addressing implementation bottlenecks. Regular sharing of M&E data also helped facilitate the discussions that led to project restructuring. By way of example, the original PDO indicators which were tracking completion of training courses were adjusted during the 2014 restructuring to track completion of a core curriculum, which proved instrumental in the design of subsequent training plans.

Taking into account the above-mentioned weaknesses in design and utilization, overall M&E Quality is rated Modest.

M&E Quality Rating

Modest

10. Other Issues

a. Safeguards

Environmental and Social Compliance

This technical assistance project was classified as Category C for social and environmental purposes. No safeguards policies were triggered by the project. A Strategic Environmental and Social Assessment (SESA) was prepared to inform sector-wide impact mitigation plans. The project was expected (PAD; p. 16) to have positive social impacts, as a result of its focus on sound governance and improved management of oil resources, and the education and skills development activities, which would allow a greater number of Ghanaians to be equipped for work in the new sector. Environmental and social risks were deemed to be low since all construction activities, including upgrading of the Petroleum Commission's head office and refurbishing of an office extension block of the MoE and of existing lab facilities at TTI, RMU and KTI, occurred in state-owned/occupied facilities with no additional land acquisition. Adverse impacts were considered insignificant, and any arising were largely reversible. Based on this, simplified Environmental



Impact Assessments were conducted prior to building the extension block for the MoE and a 3-building block for KTI.

At project closing, the project's social and environmental performance was rated satisfactory, and no infractions were recorded as of the closing ISR.

b. Fiduciary Compliance

The PAD noted (p.15) that though the Ministry of Energy's accounts department had limited understanding of IDA disbursement and financial management (FM) procedures and requirements, the Project Coordination Unit (PCU) for the on-going Energy Development and Access Project would provide fiduciary support for the Oil & Gas Capacity Building Project as well. Additional accounting staff would be assigned to the PCU as required. This appears to have worked out well in practice, as the project had satisfactory FM ratings, attributable to the Project Accountant heading the Accounting Unit, and the supervisory roles performed by the Project Coordinator. According to the ICR, the project remained in full compliance with the financial covenants of submitting acceptable financial reports, including audits. Regarding submission of periodic financial reports, the PCU complied fully in its submission of acceptable IFRs. The project complied satisfactorily in terms of the submission of acceptable audit reports and management letters; the most recent of which was received within six months of the end of the fiscal year and in compliance with the provisions of the Financing Agreement.

The project's procurement rating at project closing was satisfactory. The ICR notes (p.31) that the PCU was able to complete almost all planned procurements in compliance with the Banks Procurement Guidelines, despite various challenges faced. However, it should also be noted, as mentioned in Section 4, that the failure of the vocational training institutions to provide the facilities needed to install the procured equipment resulted in major delays and required the project to provide for the building/refurbishing of new spaces, directly or in partnership with the private sector, as well as the provision of ancillary services, such as power, internet and sanitary facilities (ICR, para 61).

c. Unintended impacts (Positive or Negative)

d. Other

11. Ratings



Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Satisfactory	Moderately Satisfactory	Efficiency is rated Modest, on account of cost overruns and delays in implementation, as opposed to Substantial in the ICR.
Bank Performance	Satisfactory	Moderately Satisfactory	Quality at Entry rated Moderately Unsatisfactory on account of implementation weaknesses not identified during preparation. Quality of Supervision rated Moderately Satisfactory on basis of limited details provided in ICR.
Quality of M&E	Modest	Modest	---
Quality of ICR		Substantial	---

12. Lessons

IEG derives the following lessons, drawn from the ICR:

- The design of technical assistance projects calls for adequate attention to be paid to the question of institutional managerial capacity and competence. Shortcomings in this respect at both the individual institutions and at the supervising institution (COTVET in this project), led to problems and delays in the implementation of the vocational component.
- Equipment specifications: Inadequate specification of the major equipment purchases can result in major implementation challenges down the line, as occurred in the current project. It is important for project design to pay specific attention to this aspect.

13. Assessment Recommended?

No

14. Comments on Quality of ICR

The ICR is clearly written, concise and generally consistent with guidelines. It provides a good description of the project's activities and achievements, including some of the implementation challenges faced. The analysis of project design and implementation issues is generally evidence-based and candid. Among the



ICR's weaknesses, the discrepancy in the project's actual costs at closing (US\$54.8 m.), cited in Annex 3, and final disbursements (US\$55.03 m.) is not explained. Secondly, when discussing the quality of Bank performance, the ICR does not provide adequate background on the manner in which the project was prepared and appraised, nor on the adequacy of supervision resources and inputs.

a. Quality of ICR Rating
Substantial