

Ex-ante Evaluation for Japanese ODA Loan

1. Project

Country: The Republic of Iraq (hereinafter referred to as Iraq)

Project: Basrah Refinery Upgrading Project (I)

Loan Agreement: October 14, 2012

Loan Amount: 42,435 million yen

Borrower: The Government of the Republic of Iraq

2. Background and necessity of the Project**(1) Development achievements and issues (present situation) in the oil sector in Iraq**

The oil sector in Iraq is the largest key industry that accounts for approximately 68% of GDP and roughly 91% of national government revenue, which means it is the only resource for obtaining foreign money in Iraq. Crude oil reserves of 143.1 billion barrels have been identified, but a great deal of the reserves has been unexploited, thus leaving great potential for development. However, due to repeated conflicts and economic sanctions, current production remains at 2.4 million barrels a day. Furthermore, equipment capacity degradation at 14 refinery plants has been serious due to the war damage and facility deterioration. The rate of operation hovers low at levels of 60 ~ 75%, and refining capacity per day is 580,000 barrels in total even at three major refineries. Therefore, the domestic shortage of gasoline amounts to 40,000 barrels a day, which means Iraq has a large gap between supply and demand in oil products for people's living. Thus, although Iraq is an oil producing country, it has to import oil products from other countries: its related expenditures add up to as much as 5 billion dollars a year. It is thus an urgent issue for Iraq, which is in need of massive reconstruction, to have investments in the oil refining sector to earn foreign money through increased production of oil products as well as to prevent foreign currency outflows due to importing oil products. However, the fact is that Iraq is unable to lure sufficient investments from the private sector owing to high risks such as unstable political and security conditions.

(2) Development policy in the oil sector in Iraq and the meaning of this Project

The National Development Plan (2010 ~ 2014) formulated by the Iraqi government in 2010 emphatically aims for increased productivity and competitiveness in oil products through giving overriding priority to investments in the oil sector and introducing technologies that satisfy the existing international environmental regulations. This Project is to construct a refinery importantly consisting of a Fluid Catalytic Cracking (FCC) unit, the first FCC complex in Iraq, at Basrah Refinery, the largest existing oil refinery in Iraq. Thus, it will contribute to improving the production efficiency of the existing refinery, reducing environmental load, and transferring related technologies. At the same time, it will lead to prevention of foreign currency outflows by satisfying domestic demand through increased production of oil products, and will eventually contribute to increases in crude oil production and export of oil products in the future.

(3) Assistance policies and achievements of Japan and JICA in the oil sector

One of the aid priority areas in the assistance policy for Iraq both of the Japanese government and of JICA is “infrastructure development for economic growth,” and the priority issues include the strengthening of infrastructure in the oil and gas sector. JICA delineates “output capacity development in oil and gas production” as a cooperation program: it has implemented two ODA loan projects, the “Crude Oil Export Facility Reconstruction Project” and the “Basrah Refinery Upgrading Project (E/S)”. The total amount agreed for these two projects is approximately 52.1 billion yen. This Project is a project succeeding the Basrah Refinery Upgrading Project (E/S). As identified above, it is consistent with the development policy of Iraq and also with the aid priority area of the Japanese government and JICA. Hence, it is very necessary and relevant for JICA to implement this Project.

3. Project profile

(1) Objectives

The Project is to construct a new FCC complex at the existing Basrah Refinery in the Governorate of Basrah in the southern part of Iraq. This is instrumental in upgrading the quality of oil products, reducing the supply-demand gap, and decreasing the environmental load through increased productivity and also through transferring related technologies, thereby contributing to economic and social reconstruction in Iraq.

(2) Project site/target area

The Governorate of Basrah

(3) Outline of the Project (including procurement method)

- 1) New construction of an FCC complex
- 2) Consulting service (bidding support; implementation management/coordination; etc.)

(4) Total Project costs (Phase I)

165,329 million yen (including an ODA loan of 42,435 million yen)

(5) Implementation schedule

October 2012 ~ December 2019 (87 months); The completion of the civil works shall be the time of the project’s completion.

(6) Implementation structure

- 1) Borrower: The Government of the Republic of Iraq
- 2) Project executing agencies: The Minister of Oil (MOO) and the South Refineries Company
- 3) Operations management and maintenance system: Same as 2)

(7) Environmental and social considerations, poverty reduction, and social development

1) Environmental and social considerations

(1) Classification: Category A

(2) Reasons for the classification: This Project applies to the oil refining sector stated in the Japan Bank for International Cooperation Guidelines for Confirmation of Environmental and Social Considerations (established in April 2002; hereinafter referred to as the Environmental Guidelines).

- 2) Poverty reduction: N/A
- 3) Social development: N/A

(8) Schemes and partnerships with other donors: N/A

(9) Other special issues: N/A

4. Outputs of the Project

(1) Quantitative outputs

1) Operation and effect indices

Oil products	Amount of production from crude oil by the FCC complex (daily amount) (two years after the end of the Project)	
	Basrah light	Mishrif
Gasoline	20,797 barrels	18,496 barrels
Light oil	2,626 barrels	0
Heavy oil	24,320 barrels	36,412 barrels
Crude naphtha	1,464 barrels	296 barrels
LPG	339 tons	259 tons
Rate of operation	90	

2) Internal rate of return: Predicated on the items below, the economic internal rate of return (EIRR) will be 6.0%.

- (1) Expenses: Project expenses and operation and maintenance expenses
- (2) Benefit: Amount of foreign money spent on import of the oil product when the Project is not implemented
- (3) Project life: 20 years

(2) Qualitative outputs

Increased productivity of oil products and environmental improvements

5. External conditions and risk control

Rapid deterioration in security in Iraq

6. Evaluation results of past similar projects and lessons learned

(1) Evaluation results of similar projects

There is a lesson learned from the ex-post evaluation of past ODA loan projects stating that in some cases, achievement of the Project's targets will not produce sufficient effects when the Project's target facilities are closely related to other existing facilities.

(2) Lessons for this Project

Based on the above, as to the connection between existing refineries and the FCC complex, the Minister of Oil and the South Refineries Company shall check whether connecting work is properly carried out based on FEED formulated in the E/S phase.

7. Plan for future evaluation

(1) Indexes to be used in the coming evaluation

These will be set at the time this Project is implemented.

(2) Time of the next evaluation

Two years after the Project Completion