



Knowledge Co-Creation Program (Group & Region Focus)

GENERAL INFORMATION ON

Introduction of Advanced Natural Gas Utilization Technology

課題別研修「先進天然ガス利用技術」

JFY 2017

NO. J17-04302 / ID. 1784850

Course Period in Japan: From November 5, 2017 to November 17, 2017

This information pertains to one of the JICA Knowledge Co-Creation Program (Group & Region Focus) of the Japan International Cooperation Agency (JICA), which shall be implemented as part of the Official Development Assistance of the Government of Japan based on bilateral agreement between both Governments.

'JICA Knowledge Co-Creation (KCC) Program' as a New Start

In the Development Cooperation Charter which was released from the Japanese Cabinet in February 2015, it is clearly pointed out that *"In its development cooperation, Japan has maintained the spirit of jointly creating things that suit partner countries while respecting ownership, intentions and intrinsic characteristics of the country concerned based on a field-oriented approach through dialogue and collaboration. It has also maintained the approach of building reciprocal relationships with developing countries in which both sides learn from each other and grow and develop together."* We believe that this 'Knowledge Co-Creation Program' will serve as a center of mutual learning process.

I. Concept

Background

Our everyday lives depend on reliable and affordable energy supply to develop equitably. A stable power supply system supports all sectors and has close relation to human and economic development. It is one of the United Nations' Sustainable Development Goals to ensure universal access to affordable, reliable and modern energy services.

Natural gas, especially LNG (Liquefied Natural Gas), is one of the main energy sources utilized for power generation. It emits less carbon dioxide than coal and oil, which itself is a huge environmental merit. Relatively clean energy makes it possible to generate natural gas-fired power close to large cities, which minimize power losses. Natural gas is believed to be still rich in reserves and is exported by various countries in all over the world, which attributes to constant procurement for stable power supply of importing countries.

Developing countries with their own natural gas resources have significant opportunities for sustainable economic development. Its environmental benefits contribute to their efforts in conservation of environment. Moreover, because large scale highly efficient gas-fired power generation technology is already available, it would contribute to lower capital costs and shorter term in construction. Demand for acquiring such technology has recently been increasing in these countries and filling such needs is crucial to maximize their opportunities.

This program offers participants a chance to grasp Japan's advanced technology of natural gas utilization, including high efficient thermal power generation, other industrial usage, gas transportation and storage system, as well as institutions related to natural gas sales. Obtained knowledge is expected to contribute to further development of natural gas utilization in the countries. It is also expected that the better partnership will be created among participating countries and Japan.

For what?

This program aims at sharing the information on efficient utilization of natural gas in Japan and natural gas development in each participant's country, for promoting efficient development and utilization, as well as partnership among participating countries and Japan.

For whom?

This program is offered to young personnel in/expected to be in management levels in governmental authority or public companies dealing with natural gas for

development and/or utilization.

How?

Participants will be exposed to Japanese natural gas utilization, including high efficient thermal power generation, other industrial usage and gas transportation & storage system. They will also have a chance to discuss on their issues and problem on natural gas development.

II. Description

- 1. Title (J-No.): Introduction of Advanced Natural Gas Utilization Technology (J1704302)**
- 2. Course Period in JAPAN**
November 5, 2017 to November 17, 2017
- 3. Target Regions or Countries**
Uzbekistan, Egypt, Ghana, Sri Lanka, Tanzania, Turkmenistan, Bangladesh, Philippines, Myanmar, Mozambique, Jordan, Equatorial Guinea, South Africa
- 4. Eligible / Target Organization**
This program is designed for a governmental authority or public company which is dealing with natural gas for export and/or utilizing it within its own country.
- 5. Course Capacity (Upper limit of Participants)**
14 participants
- 6. Language to be used in this program:** English
- 7. Course Objective**
Comprehensive development plan, including efficient utilization of natural gas, will be prepared through this program. Participants will prepare draft action plan which will be shared and examined in their organization. Participants will make mutual partnership with Japanese and other participants.
- 8. Overall Goal**
Natural gas will be utilized, developed and exported more efficiently.

9. Expected Module Output and Contents:

This program consists of the following components. Details are given below:

(1) Pre-Phase before departure

Participants (selected candidates) are expected to prepare an “Inception Report” stating: 1) situation of their country in terms of the energy use and development, 2) issues & causes on natural gas development and utilization, and 3) expectation to this Program.

(The report should be prepared by Microsoft Power Point for presentation.)

(2) Core-Phase in Japan

Expected Module Output	Subjects/Agendas	Methodology
To clarify current situation and issues in each country	Presentation of the “Inception Report” by participants.	Presentation & Discussion
To understand Japan’s energy consumption portfolio, energy resource policy and natural gas utilization strategy.	(1) Outline of electric power industry in Japan	Lecture & Discussion
	(2) Outline of natural gas utilization, natural gas consumption portfolio, policy on natural resource procurement, utilization measure.	Lecture & Field visit
To understand high efficient utilization technology.	Visiting high efficient thermal power plants, fuel storage facilities, and other users.	Lecture & Field visit
To understand comprehensive Japan’s policy and technology	Outline of the institution of natural gas sales. Outline of power development & natural gas utilization.	Lecture & Field visit
To have clear idea of prioritized issues and the measures to address them in each country.	(1) Orientation/workshop on creating the Action Plan (2) Preparation of draft action plan (3) Presentation	Workshop Presentation Discussion

III. Conditions and Procedures for Application

1. Expectations for the Participating Organizations:

- (1) This program is designed primarily for organizations that intend to address specific issues or problems identified in their operation. Participating organizations are expected to utilize the program for those specific purposes.
- (2) This program is enriched with contents and facilitation schemes specially developed in collaboration with relevant prominent organizations in Japan. These special features enable the program to meet specific requirements of applying organizations and effectively facilitate them toward solutions for the issues and problems.

2. Nominee Qualifications:

Applying Organizations are expected to select nominees who meet the following qualifications.

Essential Qualifications:

- 1) Current Duties: Young personnel currently/expected to be in management level, who are dealing with natural gas development or utilization.
- 2) Experience in the relevant field: have more than 5 years of experience in the field of natural gas development or utilization.
- 3) Educational Background: be a graduate of university or equivalent.
- 4) Language: have a competent command of spoken and written English.
- 5) Health: must be in good health, both physically and mentally, to participate in the program in Japan. Pregnant applicants are not recommended to apply due to the potential risk of health and life issues of mother and fetus.

3. Required Documents for Application:

(1) Application Form: The Application Form is available at **the JICA office (or the Embassy of Japan)**.

(2) Photocopy of your passport: to be submitted with the Application Form, if you possess your passport which you will carry when entering Japan for this program. If not, you are requested to submit its photocopy as soon as you obtain it.

*Photocopy should include the followings:

Name, Date of birth, Nationality, Sex, Passport number and Expiry date.

(3) Nominee's English Score Sheet (photocopy): to be submitted with the Application Form, if you have any official documentation of English ability (e.g., TOEFL, TOEIC, IELTS).

(4)Country Report (VIANNEX): to be submitted with Application Form, typewritten in English in double spacing (about 6 to 9 pages of A-4 size).

4. Procedures for Application and Selection :

(1) Submission of the Application Documents:

Closing date for applications: **Please inquire to the JICA office (or the Embassy of Japan).**

(After receiving applications, the JICA office (or the Embassy of Japan) will send them to **the JICA Center in JAPAN by August 29, 2017**)

(2) Selection:

After receiving the documents through proper channels from your government, the JICA office (or the Embassy of Japan) will conduct screenings, and then forward the documents to the JICA Center in Japan. Selection will be made by the JICA Center in consultation with concerned organizations in Japan. *The applying organization with the best intention to utilize the opportunity of this program will be highly valued in the selection.* Qualifications of applicants who belong to the military or other military-related organizations and/or who are enlisted in the military will be examined by the Government of Japan on a case-by-case basis, consistent with the Development Cooperation Charter of Japan, taking into consideration their duties, positions in the organization, and other relevant information in a comprehensive manner.

(3) Notice of Acceptance:

Notification of results will be made by the JICA office (or the Embassy of Japan) **not later than September 29, 2017.**

5. Document(s) to be submitted by accepted participants:

- (1) **Inception Report:** should be sent to JICA Kansai International Center via e-mail (ksictp1@jica.go.jp cc with Oi.Yoshiko@jica.go.jp) by **October 16, 2017.** Please note that you are requested to meet the deadline, so that the lecturers could prepare better contents based on your report.

The Report should be prepared with the Microsoft Power Point, consisting of the following points.

1. Outline of your country (Statistical Data)
2. The organization of the natural gas development sector
Role of your organization and you duty
3. Current situation of natural gas development & utilization
(Summarize the information in the Country Report)
4. Present issues and the causes in the sector
5. Measures and plan to tackle those issues and problem

6. Your target/expectation to attend this Program in Japan

6. Conditions for Attendance:

- (1) to strictly adhere to the program schedule,
- (2) not to change the program topics,
- (3) not to extend the period of stay in Japan,
- (4) not to be accompanied by family members during the program,
- (5) to return to home countries at the end of the program in accordance with the travel schedule designated by JICA,
- (6) to refrain from engaging in any political activities, or any form of employment for profit or gain,
- (7) to observe Japanese laws and ordinances. If there is any violation of said laws and ordinances, participants may be required to return part or all of the program expenditure depending on the severity of said violation, and
- (8) to observe the rules and regulations of the accommodation and not to change the accommodation designated by JICA.

IV. Administrative Arrangements

1. Organizer:

(1) **Name:** JICA Kansai

(2) **Contact:** Yoshiko Oi (Ms.) (ksictp1@jica.go.jp and Oi.Yoshiko@jica.go.jp)

2. Implementing Partner:

(1) **Name:** Japan Electric Power Information Center, Inc. (JEPIC)

(2) **Remark:** <http://www.jepic.or.jp>

3. Travel to Japan:

(1) **Air Ticket:** The cost of a round-trip ticket between an international airport designated by JICA and Japan will be borne by JICA.

(2) **Travel Insurance:** Coverage is from time of arrival up to departure in Japan. Thus, traveling time outside Japan will not be covered.

4. Accommodation in Japan:

JICA will arrange the following accommodations for the participants in Japan:

JICA Kansai

Address: 1-5-2, Wakinoama-kaigandori, Chuo-ku, Kobe, Hyogo 651-0073,
Japan

TEL: 81-78-261-0397 FAX: 81-78-261-0465

(where "81" is the country code for Japan, and "78" is the local area code)

If there is no vacancy at JICA Kansai, JICA will arrange alternative accommodations for the participants. Please refer to facility guide of JICA Kansai at its URL, <https://www.jica.go.jp/kansai/english/office/index.html>

Expenses:

The following expenses will be provided for the participants by JICA:

(1) Allowances for accommodation, meals, living expenses, outfit, and shipping,

(2) Expenses for study tours (basically in the form of train tickets),

(3) Free medical care for participants who become ill after arriving in Japan (costs related to pre-existing illness, pregnancy, or dental treatment are not included),
and

(4) Expenses for program implementation, including materials.

For more details, please see "III. ALLOWANCES" of the brochure for participants titled "KENSU-IN GUIDE BOOK," which will be given before departure for Japan.

5. Pre-departure Orientation:

A pre-departure orientation will be held at the respective country's JICA office (or Embassy of Japan), to provide participants with details on travel to Japan, conditions of the participation in the program, and other matters.

V. Other Information

1. Participants who have successfully completed the program will be awarded a certificate by JICA.
2. For the promotion of mutual friendship, JICA Kansai encourages international exchange between JICA participants and local communities, including school and university students as a part of development education program. JICA participants are expected to contribute by attending such activities and will possibly be asked to make presentations on the society, economy and culture of their home country.
3. Participants are recommended to bring laptop computers for your convenience, if possible. During the program, participants are required to work on the computers, including preparation of Action Plan(AP), etc. Most of the accommodations have internet access. Also, there is a computer room in JICA Kansai where 14 desk-top computers are available with internet access. (Note: Some of the sites for field visit may not have internet access.)
4. Allowances, such as for accommodation, living, clothing, and shipping, will be deposited to your temporary bank account (opened by JICA) 2 to 5 days after your arrival in Japan. It is highly advised to bring some cash / traveler's check in order to cover necessary expense for this period.
5. It is very important that your currency must be exchanged to Japanese Yen at any transit airport or Kansai International Airport (KIX) in Osaka, Japan, soon after your arrival. It is quite difficult to exchange money after that, due to limited availability of facility or time during the program.

VI. ANNEX:



Country Report Information and Data on Natural Gas of your Country

The Country Report is to be submitted **with the Application Form** to JICA Office in your country **by August 29, 2017**. Please fill the following form as much as possible, with data source mentioned. Typewritten in English in double spacing (about 6 to 9 pages of A-4 size) is recommended.

Country: _____

Name: _____

1. Policy

(a) Describe National Energy Policy briefly.

(b) Describe National Policy on Securing Resources.

2. Natural Gas

(a) Volume of Natural Gas Production and Domestic Consumption.(year: _____)

<u>Natural Gas Production</u>	(Volume) _____ m ³
<u>Natural Gas Consumption</u>	(Volume) _____ m ³

(b) Breakdown of the Domestic Consumption.(year: _____)

<u>Power Generation</u>	_____ %
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For Your Reference

JICA and Capacity Development

The key concept underpinning JICA operations since its establishment in 1974 has been the conviction that “capacity development” is central to the socioeconomic development of any country, regardless of the specific operational scheme one may be undertaking, i.e. expert assignments, development projects, development study projects, Knowledge Co-Creation programs (until 2015, so called “training”), JOCV programs, etc.

Within this wide range of programs, Knowledge Co-Creation Programs have long occupied an important place in JICA operations. Conducted in Japan, they provide partner countries with opportunities to acquire practical knowledge accumulated in Japanese society. Participants dispatched by partner countries might find useful knowledge and re-create their own knowledge for enhancement of their own capacity or that of the organization and society to which they belong.

About 460 pre-organized programs cover a wide range of professional fields, ranging from education, health, infrastructure, energy, trade and finance, to agriculture, rural development, gender mainstreaming, and environmental protection. A variety of programs are being customized to address the specific needs of different target organizations, such as policy-making organizations, service provision organizations, as well as research and academic institutions. Some programs are organized to target a certain group of countries with similar developmental challenges.

Japanese Development Experience

Japan was the first non-Western country to successfully modernize its society and industrialize its economy. At the core of this process, which started more than 140 years ago, was the “*adopt and adapt*” concept by which a wide range of appropriate skills and knowledge have been imported from developed countries; these skills and knowledge have been adapted and/or improved using local skills, knowledge and initiatives. They finally became internalized in Japanese society to suit its local needs and conditions.

From engineering technology to production management methods, most of the know-how that has enabled Japan to become what it is today has emanated from this “*adoption and adaptation*” process, which, of course, has been accompanied by countless failures and errors behind the success stories. We presume that such experiences, both successful and unsuccessful, will be useful to our partners who are trying to address the challenges currently faced by developing countries.

However, it is rather challenging to share with our partners this whole body of Japan’s developmental experience. This difficulty has to do, in part, with the challenge of explaining a body of “tacit knowledge,” a type of knowledge that cannot fully be expressed in words or numbers. Adding to this difficulty are the social and cultural systems of Japan that vastly differ from those of other Western industrialized countries, and hence still remain unfamiliar to many partner countries. Simply stated, coming to Japan might be one way of overcoming such a cultural gap.

JICA, therefore, would like to invite as many leaders of partner countries as possible to come and visit us, to mingle with the Japanese people, and witness the advantages as well as the disadvantages of Japanese systems, so that integration of their findings might help them reach their developmental objectives.



CORRESPONDENCE

For enquiries and further information, please contact the JICA office or Embassy of Japan. Further, address correspondence to:

JICA Kansai International Center (JICA Kansai)

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