



Knowledge Co-Creation Program (Group & Region Focus)

GENERAL INFORMATION ON

PROMOTION OF ENERGY EFFICIENCY AND CONSERVATION(A)

課題別研修「エネルギーの高効率利用と省エネの推進(B)」

JFY 2017

NO. J17-04297/ ID. 1784598

Course Period in Japan: October 31, 2017 to December 16, 2017

This information pertains to one of the JICA Knowledge Co-Creation Programs (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 is released from the Japanese Cabinet on 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

Energy efficiency and conservation refer to efforts made “to reduce superfluous energy consumption” and “to increase energy efficiency in terms of technical development”. Not only does it reduce the amount of energy consumption per se, but it also contributes to vitalizing the economy through improvement of energy efficiency and shift to energy saving products.

Attention to environmental conservation and sustainable energy has grown over the years, and it is vital that all countries take proactive stance on energy efficiency and conservation. Japan highly depends on energy resources abroad, however, in the wake of two oil crises in the 1970s, the society came together to improve energy efficiency and led Japan’s energy conservation to the highest level amongst the world. Through the experience, Japan holds a great comparative advantage in the field of energy efficiency and conservation both in terms of technology and system.

One of the key areas addressed under Japan’s mid-term policy on ODA is global warming which promotes measures to reduce greenhouse gases and adaptation to climate change. The training program is in line with the policy of Japan and will provide the participants essential knowledge of efficiency technology in commercial, residential and industry sector of Japan.

This course was integrated and reconstructed a plurality of energy efficiency and conservation courses that implemented until the previous fiscal year, such as “Energy-Saving Technology and Governmental Promotion”, “Policy Planning for Energy Efficiency and Conservation” and “Energy Efficiency and Conservation Technology in Commercial and Residential Sector”.

For what?

This program is offered to **central and local governmental organizations and private companies** involved in the energy efficiency and conservation policy, measures and promotion, **in a country which has already worked on energy efficiency.**

For whom?

This program is targeted to **government officials and private company staff** in charge of the energy efficiency and conservation involved in developing or implementing policies and measures related to energy-saving policy and efficient use of the energy. The program aims to give participants the opportunity to acquire **intermediate level knowledge of technical and political approaches** in energy efficiency and conservation.

How?

Participants will learn concepts related to the promotion of energy efficiency and conservation as well as history of energy saving activities, laws and regulations, example cases of energy efficiency in commercial, residential and industrial sector and energy management. They will also understand the mechanisms and measures involved in the policy making through specific approaches of energy efficiency.

II. Description

- 1. Title (J-No.): Promotion of Energy Efficiency and Conservation (B) (J1704297)**
- 2. Period of program:**
October 31 to December 16, 2017
- 3. Target Regions or Countries:**
Bosnia and Herzegovina, Brazil, Egypt, Former Yugoslav Republic of Macedonia, India, Kosovo, Malaysia, Philippine, Serbia, and Turkey
- 4. Eligible /Target Organization:**
This program is designed for central and local governmental organizations involved in energy efficiency and conservation policy, measures and promotion in a country which has already introduced energy efficiency.
- 5. Course Capacity (Upper limit of Participants):**
12 Participants
- 6. Language to be Used in This Program:** English
- 7. Course Objective:**
Participants will be able to recognize the tasks in the belonging organization and formulate an action plan for the diffusion of energy efficiency reflecting the actual conditions of the own country.
- 8. Overall Goal**
The energy efficiency policy and enforcement plan of the own country are carried out. Energy is used effectively, and saving energy method is promoted.

9. Expected Module Output and Contents

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

(1) Preliminary Phase in a participant's home country <i>Participating organizations make required preparation for the Program in the respective country.</i>	
Expected Module Output	Activities
Job Report (running form)	Preparation of Job report in running form for the presentation in Japan. Job report contains the following matters: * Energy Situation in your country * Organization and main tasks * Expectations for the training course * Issues facing

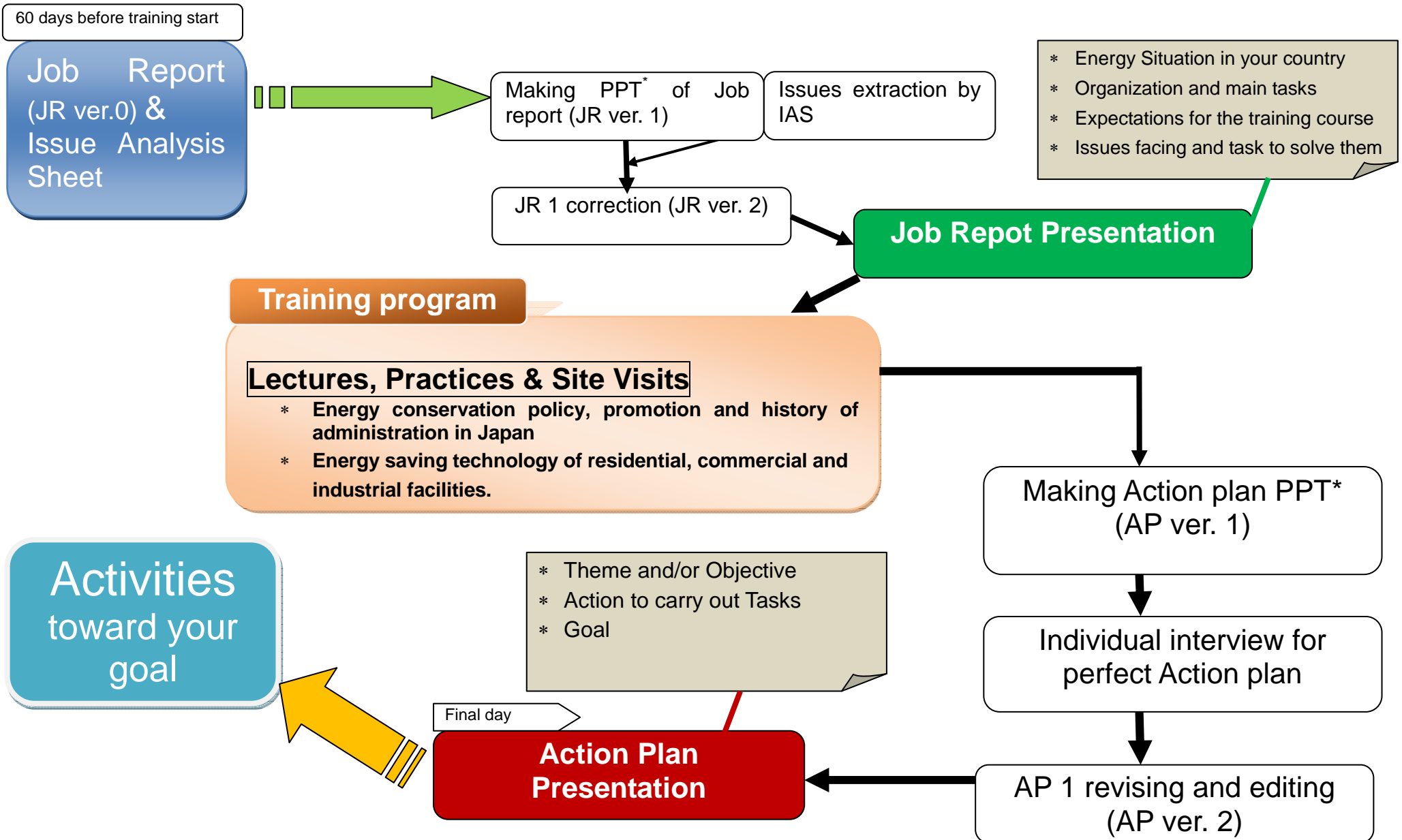
(2) Core Phase in Japan <i>Participants dispatched by the organizations attend the Program implemented in Japan.</i>		
Expected Module Output	Subjects/Agendas	Methodology
<p>Unit I : To be able to explain the problems grasping the energy circumstances and the energy efficiency policy of the own country.</p> <p>Unit IV: To be able to present action plan for the own organization, including utilization of knowledge and technologies learnt.</p>	<ul style="list-style-type: none"> • Course & Job Report Orientation • Issue identification by IAS • Job Report Guidance • Presentation of Job report • Guidance of Action Plan • Evaluation Meeting • Action Plan Presentation • Facilitation 	<p>Lecture</p> <p>Discussion</p> <p>Observation</p>

<p>Unit II: To be able to understanding energy policy, regulations, and the energy saving method and energy efficiency promotion of Japan, and to consider applicability by comparing with circumstances for introducing energy efficiency in the own country</p>	<ul style="list-style-type: none"> • Energy Efficiency Trend in Japan • Outline of ISO50001 • History of Administration and Promotion of Energy Saving in Japan • Energy Conservation Law • Energy Management Standard • Energy saving diagnosis • Supportive Measures for Promoting Energy Conservation in SME • Outline of ESCO business • Energy Conservation measures in local government • Energy Conservation Measure for Building • Outline of Energy Saving for Buildings & Energy- saving Tuning • Fundamentals of Energy Conservation Technology • Energy Conservation Technique for Air Conditioner • Energy Conservation of Lighting • Waste Heat Utilization and Heat Pumps • Basics of Inverter • Energy Conservation by using Inverter • Basic of Maintenance & Condition Diagnosis Technologies (CDT) • Energy Conservation of Cement Industry • Energy Conservation in Steel Industry 	<p>Lecture Discussion Observation</p>
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<p>Unit III: To be able to understand concrete measures of the real energy efficiency, effectiveness and profit through the field visits of the excellent cases, and to consider the differences and the applicability of measures by comparing with the factory of the own country.</p>	<ul style="list-style-type: none"> • District Heating & Cooling • Basics of Steam & Steam Trap • Energy Conservation of Pump • Practice of CDT • Practice of Measuring Instruments for Energy Saving • Importance of alignment And Laser Alignment Technique • Examples of Rotating Machine CDT • Visit to Cement Factory • Visit to Car fabrication Factory • Visit to TOTO • Performance maintenance activities in thermal power plants • Visit to Shin-kokura Power Plant • Practice of Energy Conservation for Rotating Machinery • Practice/Exercise of Energy saving diagnosis • Visit to ASBIL • Visit to Hospital Building • Effort to Zero Energy Building • Visit to Yaskawa Robot Factory • Training for Eco-Drive • Moving Time 	<p>Lecture Discussion Observation</p>
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<p>(3) Finalization Phase in a participant's home country <i>Participating organizations produce Final Report by making use of results brought back by participants. This phase marks the end of the Program.</i></p>	
<p>Expected Module Output</p> <p>Action Plan and/or Revised Strategic Plan and Guidelines are approved in the participant's organization.</p>	<p>Activities</p> <p>Application and implementation of Action plan back in the participant's country.</p>

Concept of Training Program



*PPT: "Microsoft PowerPoint"

III. Conditions and Procedures for Application

1. Expectations from 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 use the project for those specific purposes.
- (2) This program is enriched with contents and facilitation schemes specially developed in collaboration with relevant prominent organizations in Japan.
- (3) These special features enable the project to meet specific requirements of applying organizations and effectively facilitate them toward solutions for the issues and problems.
- (4) As this program is designed to facilitate organizations to come up with concrete solutions for their issues, participating organizations are expected to make due preparation before dispatching their participants to Japan by carrying out the activities of Preliminary Phase describes in section II-9.
- (5) Participating organizations are also expected to be prepared to make use of results achieved by their participants in Japan by carrying out the activities of the Finalization Phase describes in section II-9.

2. Nominee Qualifications

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

(1) Essential Qualifications

- 1) Current Duties: be officer in charge of policy and/or promotion for energy efficiency and conservation
- 2) Be recommended by the government of the own country
- 3) Experience in the relevant field: have **more than 2 years of occupational**
- 4) Educational Background: be university graduates or those who have equivalent **experience** in the above-mentioned field.
- 5) Language: have a competent command of spoken and written English, which is equal to TOEFL CBT 250 or more.
- 6) 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.

(2) Recommendable Qualifications

- 1) Age: be under fifty (50) years

- 2) Candidate shall have the knowledge, ability and financial basis necessary for energy efficiency and conservation.

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 passport: to be submitted with the application form, if you possess a 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: to be submitted with the application form. If you have any official documentation of English ability. (e.g., TOEFL, TOEIC, IELTS)

(4) Job Report: to be submitted with the Application Form. Fill in *Annex-I* of this General Information. **Application Form without Job Report can not be accepted.**

(5) IAS (Issue Analysis Sheet): to be submitted with the Application Form. Fill in *Annex-II* of this General Information. **Application Form without IAS can not be accepted.**

4. Procedure for Application and Selection

(1) Submitting 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 31, 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 shall be made by the respective country's JICA office (or Embassy of Japan) to the respective Government by **not later than September 29, 2017.**

5. 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 training expenditure depending on the severity of said violation.
- (8)** to observe the rules and regulations of the accommodation and not to change the accommodation designated by JICA.
- (9)** to participate in the whole program including the preparatory phase prior to the program in Japan. Applying organizations, after receiving notice of acceptance for their nominees, are expected to carry out the actions described in section ***//-9***.

IV. Administrative Arrangements

1. Organizer

(1) **Name:** JICA KYUSHU (Training Program Division)

(2) **Contact:** kicctp@jica.go.jp

2. 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:** Term of Insurance: From arrival to Japan until return to your country.

3. Accommodation in Japan

JICA will arrange the following accommodations for the participants during in Japan.

JICA Kyushu International Center (JICA KYUSHU)

Address: 2-2-1, Hirano, Yahata-Higashiku, Kitakyushu-shi, Fukuoka 805-8505, JAPAN

TEL: 81-93-671-6311 FAX: 81-93-671-0979

(where "81" is the country code for Japan, and "93" is the local area code)

If there is no vacancy at JICA KYUSHU, JICA will arrange alternative accommodations for the participants.

<http://www.jica.go.jp/english/about/organization/domestic/pdf/kyushu01.pdf>

4. Expenses

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

(1) Allowances for accommodation, 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)

(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 Japanese Embassy), to provide participants with details on travel to Japan, conditions of the workshop, and other matters.

V. Other Information

1. Reports and Presentation

(1) Job Report & Issue Analysis Sheet (IAS)

As written in the previous page, each applicant is required to submit his/her own Job Report & Issue Analysis Sheet (IAS). Participants will have a presentation of his/her Job Report up to 10 minutes at the earlier stage of the training in order to share knowledge and background with other participants as well as instructors.

Visual materials such as Power Point and pictures may be helpful for your presentation if you bring them with you. When you use Power Point in the presentation, it is preferable to use letters more than 24 points and not to use pictures on the background.

(2) Action Plan Report

Participants are required to make an Action Plan by the end of the training to express your idea and plan, which you carry out after your return, reflecting the knowledge and method you acquire from the training. Each participant will have 10 minutes for presentation. The report would be sent to the respective country's JICA office.

2. International Exchange Program with Local Communities:

JICA encourages international exchange between JICA participants and local JICA encourages international exchange between JICA participants and local communities. Participants are recommended to bring their national costumes or crafts and materials such as CD and photographs that will make the exchange program more fruitful.

In this course, the participants are planning to visit to **the Fukuoka prefectural Miyako high school**.

3. Japanese Language Course:

Japanese language course (8 hours) will be conducted prior to technical training.

4. Remarks:

This training is designed for the purpose of acquiring the knowledge and the techniques of Japan, NOT for a specific participant's country. Participants are kindly requested to understand the differences and not to insist on the techniques of their countries.

VI. ANNEX:

Annex I	Job Report
Annex II	Issue Analysis Sheet (IAS)
Annex III	Issue Analysis Sheet (IAS) Guidelines
Annex IV	Sample Schedule

Annex I: Job Report

Job Report

Name:

Country:

Organization and present post:

E-mail:

FAX:

Remarks 1: The Report should be **typewritten in English** (11-point font, A4 size paper) and total pages of the report should be limited to **4 pages** (not including organization chart).

Remarks 2: Each one of you is required to have presentation of 15 minutes based on this Inception Report at the early stage of training in order to share knowledge and background with other participants as well as instructors. Visual materials such as PowerPoint and pictures may be helpful for your presentation to bring with you.

Remarks 3: The following is an example of the contents of the Inception Report;

1. Energy Situation in your country (up to 1 page)

- (1) Primary energy supply mix (circle graph)
- (2) Self-sufficient rate of energy supply
- (3) Final energy consumption mix (circle graph)
- (4) Electric power supply mix (circle graph)
- (5) Electrification cover rate
- (6) Enactment & enforcement situation of energy conservation law &/or regulation

2. Organization and main tasks (up to 1 page)

- (1) Main tasks of the organization
- (2) Organization chart:
Please draw a chart of your organization including the department (section) names with the number of staffs in it and mark where you are positioned.
- (3) (The chart should be attached and not be counted in this page limit.) Please describe a duty of each department (section) briefly.
- (4) Brief description of your assignments
- (5) Explain the relation of your assignments and "energy efficiency and conservation technology in commercial and residential sector".
- (6) Problems in your job

3. Expectations for the training course (up to 2 page)

- (1) Your purpose of participating in the course
- (2) Subjects of the course which you are interested in the most
- (3) How do you expect to apply skills and knowledge for your problem solving according to listed items in curriculum (p. 3) after you return to your home country?
- (4) Other matters which you are expecting to obtain from the course
- (5) Have you ever learned the following subjects in your work? We want to know your work experience. Please check either "Yes" or "No".
- (6) If your answer "Yes", please fill in "Years" column as to the length of your application on the respective items.

	Yes	No	Years
a) Energy administration			
b) Energy Conservation Sector in Commercial & Residential Sector			
c) Energy Management			
d) Air Conditioning System			
e) Lighting equipment			
f) Fan, blower or pump			
g) Inverter system			
h) Renewable Energy			
i) Other*			

*Other: please specify subject associated with energy saving technique, not covered by any of the items "1" to "8"

Annex II: Issue Analysis Sheet (IAS)

Name: _____

	[A] Issues that you (your organization) confront(s).		[B] Action that you (your organization) are (is) taking.	[C] Subject No.*)
1		1		
2		2		
3		3		

*) [C] Please write the **Subject No.** you most expect to get the information you need.
 For the "Subject No.", please refer the "Number of Subject/Agendas" shown in the tables of this General Information (Page 3- 4)

Annex III: Issue Analysis Sheet (IAS) Guidelines

1. What is IAS?

- (1) IAS is a tool to logically organize relationships between issues and contents of the training program in Japan.
- (2) IAS will help the nominee to clarify his/her issues to be covered in training contents and to formulate solutions to them.
- (3) IAS is to be utilized as a logical process control sheet to draw up improvement plans for the issues by filling out the sheet prior to the nominee's arrival till the end of the training.
- (4) In addition, the course leader and lecturers will use IAS to understand the issues that each participant is confronting, and provide him/her with technical advice, useful references and solutions during the training program in Japan.

2. How to fill out IAS?

- (1) Please describe the issues you (your organization) confront(s) in column "[A] Issues that you (your organization) confront(s) "

Prepare the separate rows for each issue; if necessary, please add rows.

- (2) In column "[B]: Actions that you (your organization) are (is) taking", please describe actions that you (your organization) are taking to solve the issues shown in "Column [A]"

This information is very important to carry out the training course and also to develop Action Plan as an output of the training program.

- (3) The purpose of this training course is to provide the information you need. The contents of this course are shown in (2) Core Phase in Japan of 9. Expected Module Outputs and Contents at page 2. Referring to the "List of Subjects" in this table, from which you expect to get useful information, and write their Subject No. in column "[C]: Subject No"

You can write as many subjects as you think the subjects are related.

Please write "Subject No." into the column; you do not need to write "Subject Titles. "

Annex IV: Sample Schedule

**This is the sample schedule from previous year's training program. Please note that training content is subject to change for this year.*

	9:30- 12:30		13:30- 16:30
Tue	Arrival		
Wed	Briefing Session		Program Orientation / Flight meeting
Thu	General Orientation (Administration & Politics) (Economy)		General Orientation (Economy)
Fri	Course Orientation		Guidance of action plan
Sat	Free		
Sun	Free		
Mon	Energy efficiency trend in Japan		Cultural Exchange Program
Tue	Extraction of Issues based on IAS		Extraction of Issues based on IAS
Wed	ISO 50001		History of administration and promotion of energy efficiency in Japan I
Thu	History of administration and promotion of energy efficiency in Japan II		Administration standards of energy + Recapitulation
Fri	Energy diagnosis		Practice: Factory diagnosis
Sat	Kitakyushu city Bus tour		
Sun	Free		
Mon	Waste heat utilization and heat pumps		Practice: Factory diagnosis
Tue	Energy efficiency policy of buildings		Job report presentation
Wed	Basic knowledge of Inverter		Practice: Inverter
Thu	Outline of air conditioning facility		Outline and tuning for energy efficiency of buildings
Fri	Energy efficiency in air conditioning facility		Energy efficiency law Energy efficiency by Inverter
Sat	Free		
Sun	Free		
Mon	Energy efficiency in cement industry		<<Site visit>> Sanitary facility equipment
Tue	<<Site visit>> Power plant		Maintaining performance for thermal power plant
Wed	Energy efficiency promotion support for small and medium-sized enterprises		Energy efficiency policy of local government
Thu	Outline of Energy Saving for Buildings & Energy- saving Tuning		Transfer to Kashima City

Fri	Energy efficiency of rotary machine		Practice : rotary machine
Sat	Free		
Sun	Free		
Mon	ESCO Business		<<Site visit>> Office building
Tue	Energy efficiency in Iron & steel industry		Transfer to Kakogawa
Wed	Stream and steam trap		Stream and steam trap
Thu	Energy efficiency by Pomp		Energy efficiency by Pomp
Fri	Energy efficiency in lighting facility		Energy efficiency in lighting facility
Sat	Kyoto morning tour		Transfer to kitakyushu city
Sun	Free		
Mon	Zero emission building		Zero emission building
Tue	Practice: equipment diagnosis		Practice: equipment diagnosis
Wed	free		free
Thu	Practice: Energy diagnosis		Importance of centering
Fri	Making action plan		Making action plan
Sat	Free		
Sun	Free		
Mon	<<Site visit >> Robot factory		District heat and cooling
Tue	Cases for equipment diagnosis		<<Site visit >> hospital
Wed	Principle of energy efficiency technology		Energy efficiency drive education
Thu	<< Site visit >> Cement Industry		<<Site visit >> automotive factory
Fri	Evaluation meeting		Action plan presentation, Closing Ceremony
Sat	Departure		

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, training programs, JOCV programs, etc.

Within this wide range of programs, Training 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



CORRESPONDENCE

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

JICA Kyushu International Center (JICA Kyushu)
Address: 2-2-1 Hirano, Yahatahigashi-ku, Kitakyushu-shi, Fukuoka
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