

No.34/4/2009-EO(F)  
Government of India  
Ministry of Personnel, P.G. and Pensions  
(Department of Personnel and Training)

New Delhi, the 13<sup>th</sup> February, 2009

**OFFICE MEMORANDUM**

**Subject : Group Training Course in Thermal Power Engineering for Gas Turbine and Coal Fired Steam Turbine to be held in Japan from 11.5.2009 to 5.7.2009.**

The undersigned is directed to state that the Japan International Cooperation Agency (JICA) under the Technical Cooperation programme of the Government of Japan has invited applications for a Group Training Course in Thermal Power Engineering for Gas Turbine and Coal Fired Steam Turbine to be held in Japan from 11.5.2009 to 5.7.2009. There are 7 slots available globally. The details of the course and the application form can be drawn from the Ministry of Personnel, P.G. & Pensions website ([www.permin.nic.in](http://www.permin.nic.in)).

2. The Group Training course is designed particularly for engineers who are in charge of management, control and maintenance at gas turbine power. The programme will provide knowledge and skills for management, operations, maintenance and environmental conservation, to be shared and promoted among the participants organization. The applicant should be under 50 years of age, have sufficient command of spoken and written English, be in good health both physically and mentally and should not be serving in any form of military service. He should be senior mechanical engineer and currently involved in the operational management and maintenance of gas turbine power plants.

3. The fellowship award covers a round trip air ticket between an international airport designated by the JICA and JAPAN, allowances for accommodation, living expenses, shipping, expenses for JICA study course, free medical care for those who may fall ill after reaching Japan. The participants are not allowed to take any family member during the training course.

-/-

4. It is requested that the nomination of suitable candidates may please be forwarded on the prescribed proforma A2 and A3 duly authenticated by the Department concerned to this office not later than 20<sup>th</sup> March, 2009.

  
(Trishaljit Sethi)  
Director

To

1. Ministry of Power, Shram Shakti Bhavan, New Delhi
2. All State Governments/UTs
3. Director Technical(NIC) with the request to post the circular alongwith the JICA's circular on the Department's website.

No. 6/GT-CP/2009

9<sup>th</sup> February, 2009

Dear Mr. R.K. Kharb

A Group Training Course in Thermal Power Engineering for Gas Turbine and Coal Fired Steam Turbine will be held in Japan from 11<sup>th</sup> May, 2009 to 5<sup>th</sup> July, 2009, under the Technical Cooperation Programme of the Government of Japan.

We are forwarding herewith two copies of the General Information Booklet on the above offer. It is requested that the following documents of the selected candidate may please be submitted to this office by **31<sup>st</sup> March 2009**:-

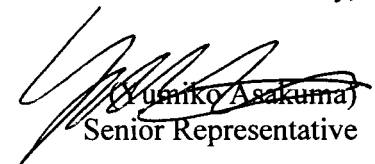
- (1) The Nomination Form A2A3 together with the medical history questionnaire,
- (2) The desired Country Report

Further details are available in the General Information Booklet. It may be noted that the completed Country Report is essential for screening of applications.

It is further informed that 7 slots are available globally for the said course and it would be much appreciated if you could take further necessary action and submit the nomination(s) of suitable candidate(s) to this office by the designated date.

With regards,

Yours sincerely,



(Yumiko Asakuma)  
Senior Representative

Encl: As stated above.

Mr. R.K. Kharb  
Desk Officer  
Department of Personnel and Training  
Ministry of Personnel, Public Grievances and Pensions  
North Block  
New Delhi

Copy to:-

Ms. Arun Prabha, Under Secretary (PMU and Trg.), Department of Economic Affairs, Ministry of Finance, North Block New Delhi.



# TRAINING AND DIALOGUE PROGRAMS

## GENERAL INFORMATION ON

**Thermal Power Engineering Course  
for Gas Turbine and Coal Fired Steam Turbine  
集団研修「ガスタービン・蒸気タービン(石炭)火力発電」  
JFY 2009**

**<Type: Trainers Training / 類型: 人材育成普及型 >**

**NO. J09-00638/ ID. 0980578**

**From April 2009 to October 2009**

**Phases in Japan: From May 12, 2009 to July 5, 2009**

This information pertains to one of the Training and Dialogue Programs 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.

# **I. Concept**

## **Background**

Stable electric power supplies are an essential condition for the industrial and economic advancement of developing countries and for improving the standard of living of their populations. With electricity consumption still increasing, it is necessary to create an infrastructure capable of coping with the growing demand for electric power in order for developing countries' economies to grow, and living standards to improve, in a sustainable manner.

In this connection, this course was launched in 1963 and has been renewed several times. From 2007, this course was revised to be a trainers training and added dissemination stage was added as a finalization phase in participants' country after the core stage in Japan.

## **For what?**

This program aims to provide knowledge and skills for management, operations, maintenance and environmental conservation which are the outputs of this program in order to be shared and promoted among his/her organizations.

## **For whom?**

This program is offered to engineers who are in charge of management, control and maintenance at gas turbine power.

## **How?**

This program is implemented by Japan Electric Power Information Center, Inc. (JEPIC) and the Power Engineering & Training Services, Inc. (PET).

Japan Electric Power Information Center, Inc. (JEPIC) was established as an association of Japan's major electric power companies. The purpose of the Center is to facilitate information exchange on activities of electric utilities with foreign counterparts and also to promote technical cooperation with developing countries.

The Power Engineering & Training Services Co., Ltd. (PET) established in April 1, 2002 is an affiliate company of the Chugoku Electric Power Co., Inc. (CEPCO). CEPCO, one of Japan's ten regional electric power companies, supplies reliable and safe electricity to meet the demands of its more than 4.9 million customers in Chugoku, the south-west region of Japan's main island.

## **II. Description**

**1. Title(J-No.):Thermal Power Engineering Course  
for Gas Turbine and Coal Fired Steam Turbine (J0900638)**

**2. Period of program**

<b>Duration of whole program:</b>	April 2009 to October 2009
<b>Preliminary Phase:</b> (in a participant's home country)	April 2009 to May 2009
<b>Core Phase in Japan:</b>	May 12 to July 5, 2009
<b>Finalization Phase:</b> (in a participant's home country)	July 2009 to October 2009

**3. Target Regions or Countries**

Armenia, Bangladesh, India, Indonesia, Syria, Turkey and Vietnam

**4. Eligible / Target Organization**

Operational management/ maintenance section at a gas turbine/coal fired steam turbine power plant

**5. Total Number of Participants**

8 participants

**6. Language to be used in this program:** English

**7. Program Objective:**

Knowledge and skills for management, operations, maintenance and environmental conservation which are the outputs of this program will be shared and promoted among his/her organization.

**8. Overall Goal**

Knowledge and skills for management, operations and maintenance will be improved at his/her organization.

**9. Expected Module Output and Contents:**

In this program, participants are expected to achieve these six (6) module outputs through three (3) phases;

- (1)Participants will make a job report and issue analysis sheet of their organizations by the end of preparatory phase.
- (2) Participants will be able to analyze and assess similarities and/or differences between electric power industry in Japan and in their country.
- (3) Participants will be able to analyze knowledge and information on effective techniques of operation and control, effective maintenance and troubleshooting, advanced technologies for environmental conservation by thermal power plants which are gained in Japan, according to the prepared issue analysis.

- (4) Participants will make an action plan on dissemination activities of skills and knowledge gained from the training program in Japan.
- (5) The dissemination plans made by the participants will be shared in their organizations.
- (6) The dissemination plans will be discussed and promoted in their organizations.

Details on each phase are given below:

<b>Preliminary Phase in a participant's home country</b> (April 2009 to May 2009) <i>Participating organizations make required preparation for the Program in the respective country.</i>	
Expected Module Output	Activities
Jot Report Issue Analysis Report	Formulation and submission of Job Report and Issue Analysis Report

<b>Core Phase in Japan</b> (May 12 to July 5, 2009) <i>Participants dispatched by the organizations attend the Program implemented in Japan. For 3. (2), (3) and (4), participants will be divided into 2 groups (gas turbine/steam turbine) for some programs.</i>			
Units	Subjects	Aims	Time Allocation (days)
1. Program Orientation		To understand overall course objectives, goals, flows, and contents of each unit/subject.	0.5
2. Presentation of Job Reports		To clarify the problems and difficulties of each participant's country. To understand the problems/subjects and circumstances in the power sector of other countries.	1.5
3. Technical Training			
(1) Outline of the Electric Power Industry in Japan	-Outline of the Electric Power Industry in Japan - Total Quality Management (TQM) activities	To enable the participants to gain an understanding of the organization and legal system regulating Japan's electric utility industry, as well as an understanding of electric power supply and power source development plans.	2.0
(2) Acquisition of operation and management techniques for thermal power plants	· Organizational structure of an electric power company · Comprehensive management of affiliated companies · Generating cost and unit construction cost · Training system and method	As an introduction to on-site training, to explain about management techniques common to individual power plants.	1.0

	<ul style="list-style-type: none"> <li>· Remaining life assessment and life extension measures</li> </ul>	To assess remaining life of machine and equipment and deepen understanding of sustaining and extending their life.	1.0
	<ul style="list-style-type: none"> <li>· Safety measures</li> </ul>	To introduce various methods of specific safety based on the actual work condition in Japan and in the Chugoku Electric Power Company., Inc. After the lecture, facility observation is to be conducted in order to deepen understanding.	0.5
	<ul style="list-style-type: none"> <li>· Water quality management</li> <li>· Performance management</li> </ul>	To introduce check items such as boiler water and generating efficiency and their sampling methods.	1
	<ul style="list-style-type: none"> <li>· Facilities training for a coal-fired power plant</li> <li>· Facilities training for a gas-combined cycle power plant</li> <li>· Operation management</li> </ul>	To learn about the rationale for setting control values and responses to abnormal condition for items related to facilities maintenance. Operating methods of various environmental facilities are also to be learnt.	ST:2 GT:1.5
	<ul style="list-style-type: none"> <li>· Observation of power plants</li> </ul>	<ul style="list-style-type: none"> <li>· Refuse-using power plant</li> <li>· Misumi Power Plant (Supercritical pressure power generating facilities)</li> </ul>	1.0
(3)Acquisition of maintenance techniques for a thermal power plant	<ul style="list-style-type: none"> <li>· Periodic and daily inspections</li> </ul>	To introduce cycle, items, contents of periodic inspection and their reasons as the base for the maintenance, and to learn them through comparison with those of participants' countries. After the lecture, facilities observation is to be conducted for further understanding.	ST: GT: 0.5
	<ul style="list-style-type: none"> <li>· Cases of troubleshooting and remedies</li> </ul>	To introduce actual cases of problems and remedies as a reference for construction and maintenance in participants' countries. After the lecture, facilities observation is to be conducted to deepen understanding.	ST: GT: 1
	<ul style="list-style-type: none"> <li>· PT (Penetrate Testing)</li> <li>· MT (Magnetic Testing))</li> </ul>	As non-destructive inspection techniques, to learn the basic knowledge and to acquire skills of PT (penetrate testing) and MT (magnetic testing) through practice.	1.5
	<ul style="list-style-type: none"> <li>· Basic knowledge of vibration</li> <li>· Balancing techniques</li> </ul>	As vibration techniques, to learn the basic knowledge and to acquire skills of balancing through practice.	4
(4)Acquisition of manufacturing techniques for a thermal power plant	<ul style="list-style-type: none"> <li>· Observation of power plant manufacturing plant</li> <li>· Lecture on new manufacturing technology</li> </ul>	To improve maintenance and operation techniques by obtaining architecture and technical skills of plant facilities.	ST: GT: 2
(5)Acquisition of environmental conservation technologies for thermal power plants	<ul style="list-style-type: none"> <li>· Environmental situation and efforts in Japan</li> <li>· Environmental measures taken by a power company</li> <li>· Legal structure for environment</li> <li>· Facilities for environmental protection</li> </ul>	To learn what environmental measures have been taken by the national government and by a power company and to increase awareness about environmental conservation.	3



	· Observation of a Waste Disposal Plant in UBE		
4. Preparation and Presentation of Dissemination Plan		At the end of this program, participants will make a final report on how to share and promote skills and knowledge gained from this program. Through this program, participants are expected not only to understand the experiences of Japan but also to implement the skills and knowledge gained in Japan after returning home.	3.5

The curriculum may be subject to minor change.

\*At CEPCO, there is only one (1) combined cycle power station in Yanai city; therefore, we'll use the place and facility of the Yanai combined cycle power station as an example of gas turbine power station during this course.

<b>Finalization Phase in a participant's home country</b>	
<i>Participating organizations produce final outputs by making use of results brought back by participants. This phase marks the end of the Program.</i>	
<b>Expected Module Output</b>	<b>Activities</b>
To implement a dissemination plan (progress report )	Participants are to implement the dissemination activities based on the action plan which was made during the program. Also, participants must submit the progress report to JICA within 3 months.

### **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 use this 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, which enables this program to meet specific requirements of applying organizations and effectively facilitate them toward solutions for the issues and problems.
- (3) 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 the Preliminary Phase described in section -9 .
- (4) Participating organizations are also expected to make the best use of the results achieved by their participants in Japan by carrying out the activities of the Finalization Phase described in section -9.

#### **2. Nominee Qualifications:**

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

##### **(1) Essential Qualifications**

- (1) Those nominated by their government in accordance with the proper application procedure;
- (2) Those who are senior mechanical engineers and currently involved in the operational management and maintenance of gas turbine power plants.
- (3) Those who are university/college graduates or with equivalent academic backgrounds;
- (4) Those who have a sufficient command of English for listening to the lectures, reading the textbooks, discussing and writing in the above field;
- (5) Those who are in good health, both mentally and physically; and  
Pregnancy : Pregnant participants are strictly requested to complete the required procedures before departure in order to minimize the risk for their health. The procedures include letter of the participant's consent to bear economic and physical risks letter of consent from the participant's supervisor letter of consent from your Embassy in Japan, medical certificate. Please ask National Staffs in JICA office for the details.
- (6) Those who are not serving in the military.

## **(2) Recommendable Qualifications**

- 1) Age: principally, under fifty (50)
- 2) Those who have practical job experiences of approximately three (3) years in the above field;

## **3. Required Documents for Application**

**(1) Application Form:** The Application Form is available at the respective country's JICA office or the Embassy of Japan

**(2) Country Report Form for Selection:** This document will be used both during selection process and the training period. The form is attached to this General Information as ANNEX. Please fill it out and submit it with the Application Form mentioned above.

## **4. Procedure for Application and Selection :**

### **(1) Submitting the Application Documents:**

Closing date for application to the JICA Center in JAPAN: **March 31, 2009**

**Note: Please confirm the closing date set by the respective country's JICA office or Embassy of Japan of your country to meet the final date in Japan.**

### **(2) Selection:**

After receiving the document(s) through due administrative procedures in the respective government, the respective country's JICA office (or Japanese Embassy) shall conduct screenings, and send the documents to the JICA Center in charge in Japan, which organizes this program. Selection shall be made by the JICA Center in consultation with the organizations concerned in Japan based on submitted documents according to qualifications. *The organization with intention to utilize the opportunity of this program will be highly valued in the selection.*

### **(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 April 14, 2009**.

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

Before coming to Japan, only accepted participants are required to prepare an Issue Analysis Report and Country Report. (detailed information is provided in the ANNEX. The Inception Report should be sent to JICA or the Japan International Cooperation Center by **May 9 2009**, preferably by e-mail to [cicctp@jica.go.jp](mailto:cicctp@jica.go.jp).

**6. Conditions for Attendance:**

- (1) to observe the schedule of the program,
- (2) not to change the program subjects or extend the period of stay in Japan,
- (3) not to bring any members of their family,
- (4) to return to their home countries at the end of the program in Japan according to the travel schedule designated by JICA,
- (5) to refrain from engaging in political activities, or any form of employment for profit or gain,
- (6) to observe the rules and regulations of their place of accommodation and not to change the accommodation designated by JICA, and
- (7) to participate the whole program including a 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 and section -4.

## **IV. Administrative Arrangements**

### **1. Organizer:**

**(1) Name:** JICA Chugoku ( JICA Chugoku International Center )

"Chugoku" is the name of the region in western part of Japan's main island. It is consisted of 5 prefectures and JICA Chugoku is in charge of the 5 prefectures

**(2) Contact:** Ms. Yoshiko MIURA (cicctp@jica.go.jp)

### **2. Implementing Partner:**

**(1) Name:** Japan Electric Power Information Center, Inc. (JEPIC),  
The Power Engineering & Training Services, Inc. (PET).

**(2) URL:** <http://www.jepic.or.jp/english/index.html>

**URL:** [http://www.energia-pet.co.jp/pet\\_index\\_e.htm](http://www.energia-pet.co.jp/pet_index_e.htm)

### **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:** Term of Insurance: From arrival to departure in Japan. \*the traveling time outside Japan shall not be covered.

### **4. Accommodation in Japan:**

JICA will arrange the following accommodations for the participants in Japan ;  
JICA Chugoku International Center

\* A few observation trips out of Hiroshima are scheduled.

JICA Chugoku International Center (JICA CHUGOKU, CIC)

Address: 3-3-1 Kagamiyama, Higashihiroshima, Hiroshima  
739-0046 Japan

TEL: 81-82-421-5800 FAX: 81-82-420-8082

(where "81" is the country code for Japan, and "82" is the local area code)

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

## **5. 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 p. 9-16 of the brochure for participants titled "KENSU-IN GUIDE BOOK," which will be given to the selected participants before (or at the time of) the pre-departure orientation.

## **6. 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. It would be appreciated if participants could bring materials, in addition to the reports, that show the situation of thermal electric power engineering in their countries such as video cassettes, photographs, photo slides and books. The reports are expected to be used as a material for presentation and for discussions during the course period.

2. Equipment that is available at JICA Chugoku International Center :

Multi Projector for PC (MS Word, Excel, Power Point), OHC, and VIDEO (NTSC)

Slide Projector

OHP Projector

TV, Video (NTSC)

DVD

Materials we cannot provide suitable equipment for are as follows.

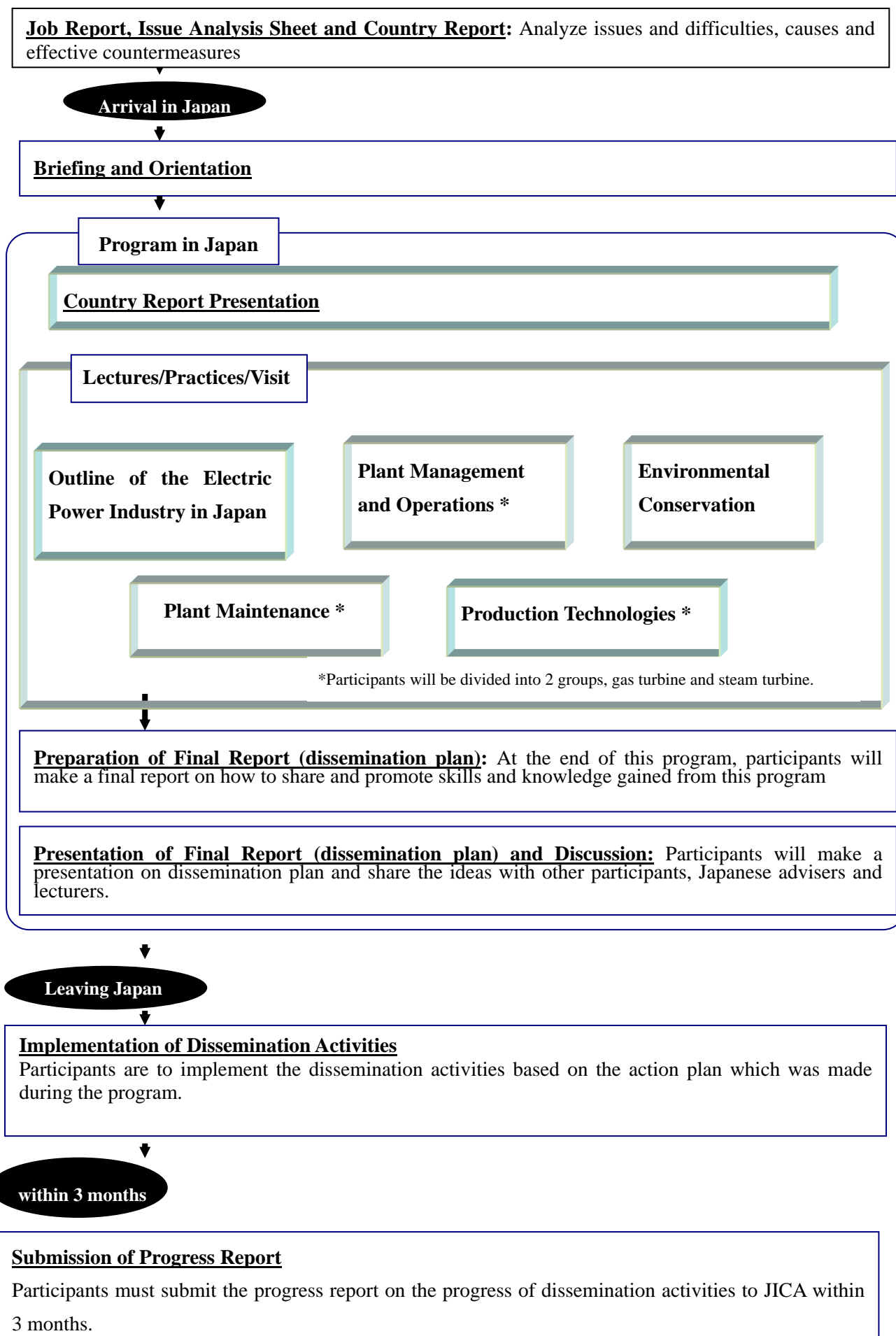
VCD

Video (PAL)

ZIP

MO        etc.

## Flow of the program





## JOB REPORT

All applicants must submit the Job Report along with the application form when applying for the program. This document shall be used to select applicants in a series of screening procedures. Please make sure that the documents are prepared according to instructions and are typewritten in English.

### Applicant's Information

<b>1. Full Name</b>	[Family]	[First]	[Middle]
<b>2. Country</b>			
<b>3. Tel/Fax</b>	Tel.	Fax.	
<b>4. Email address</b>			
<b>5. Job record</b>	Period	University & Degree / Organization & Job Title	
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<b>6. Title of your present Job</b>			
<b>7. Missions and works of your organization (Summarize in items)</b>			
<b>8. Works that you are in charge of in your organization. (Summarize in items)</b>			

<p><b>9. Title and detailed contents of Project; only those who involve in recipient power plants of ongoing or prospective ODA loan project(s) and/or in power plants associated with JICA's technical project(s).</b></p>		
<p><b>10. Choose either “Gas Turbine Course” or “Coal Fired Steam Turbine Course”</b></p>	<p><b>Enter a mark in the blank for the course you would like to take. If you would like to take both courses, write the order of priority.</b></p>	
	<p><b>Gas Turbine Course</b></p>	<p><b>Coal Fired Steam Turbine Course</b></p>
<p><b>11. Opportunities available of learning or gaining new techniques and/ or knowledge such as OJT program or workshops*</b></p>		
<p><b>12. Organizational chart</b></p>	<p>* Please attach the chart and circle where you belong.</p>	

\* At each section, department and/or power plant, participants must implement dissemination activities on skills and knowledge gained from the training program in Japan. If any OJT programs or trainings already exist, it will be more effective to make the best use of such programs. Therefore, write down the outline of existing training programs in detail.

## Issue Analysis Sheet (Description)

<Notes for making the sheet>

**1. Deadline for submission is May 9, 2009**

2. This assignment should consist of 3 (three) pages or less of A4-sized sheet.
3. Using the sample as a guide, please describe the 4 (four) items for all the subjects: A. Issue; B. Cause (of the issue); C. Measures already taken and its results; D. Knowledge and experience desired to obtain from the training.
4. For writing the sheet, opinions of related departments and personnel are to be considered. After putting them together within the department and analyzing them, results should be submitted.

<How to utilize this sheet after arrival in Japan>

5. You will write down the knowledge and experience of Japan and other countries which have been acquired through the lectures, observations and discussions during the training period. Sources of such knowledge and experience are also to be written down. (Example: Title of the lecture, textbook number)
6. Based on the above 5, please write in the column "F" how they can be adopted to your country, department and job. (This will be part of the final report.)

<How to utilize this sheet after returning home>

7. Using this sheet, please conduct a debrief session of the training program for the departments and people concerned.
8. In the session, please focus on "F" for your explanation and make necessary revisions considering comments from the attendants.

<Sample>

Subject	A. Issue	B. Cause ..... C. Measures already taken and its results	D. Knowledge and experience desired to obtain from the training	E. Knowledge and experience obtained from the training *To be written in Japan	F. Measures possibly taken in my department/country *To be written in Japan
<b>Maintenance Technology</b>	<ul style="list-style-type: none"> <li>• Due to low maintenance skills of the technical staff, machine easily breaks down.</li> </ul>	<ul style="list-style-type: none"> <li>• There is no training program available to technical staff.</li> <li>• Maintenance manual is not updated.</li> <li>• The training program for new staff allocates little time for maintenance technology.</li> </ul> <hr/> <ul style="list-style-type: none"> <li>• A system has been established in the power plant to review the maintenance manual every 3 years.</li> </ul>	<ul style="list-style-type: none"> <li>• Examples of Maintenance manual</li> <li>• Related legal system</li> </ul>	/	/

### Issue Analysis Sheet (For Submission Purpose)

Name: \_\_\_\_\_

Country : \_\_\_\_\_

Subject	A. Issue	B. Cause ..... C. Measures already taken and its results	D. Knowledge and experience desired to obtain from the training	E. Knowledge and experience obtained from the training *To be written in Japan	F. Measures possibly taken in my department/country *To be written in Japan
1. Operation and Management Technology				/	/
2. Maintenance Technology					
3. Environmental Measures					

Subject	A. Issue	B. Cause	D. Knowledge and experience desired to obtain from the training	E. Knowledge and experience obtained from the training *To be written in Japan	F. Measures possibly taken in my department/country *To be written in Japan
		C. Measures already taken and its results			
4.Others**					
5.Others**					

\* Since columns "E" and "F" will be filled in after arrival in Japan, they should be left blank at the moment.

\*\* If there are more issues outside the given subjects 1-3 in your country, power plant or department, please describe as detail as possible.

## Country Report (Part-1)

**Closing date: May 9, 2009**

The JFY2008 Training Course in Thermal Power Engineering  
– for Gas Turbine and Coal Fired Steam Turbine Power Generation –

### **[Gas Turbine Course]**

\*If you can bring any brochures or relevant documents which include the data, you do not need to fill out the following tables.

#### 1. Information related to your gas turbine plant

##### (1) Gas turbine specifications of your power plant or a typical plant

1) Type	
2) Capacity (kW)	
3) Duration of operation (number of years)	
4) Gas pressure at the turbine outlet (Pa)	
5) Gas temperature at the turbine outlet (C)	
6) Number of turbine stages	
7) Kind of fuel	
8) Gas combustion temperature (C)	
9) Type of combustor (Unit system or header system)	
10) Presence of water/steam injection system	
11) Number of air compression stages	
12) Air pressure at the air compressor outlet (Pa)	
13) Installed site (indoor or outdoor)	
14) Heat efficiency (%)	
15) Main steam pressure (Pa) (In case of combined type)	
16) Main steam temperature (C) (In case of combined type)	
17) Manufacturer	

##### (2) Generator specification

1) Capacity (kVA)	
2) Voltage (kV)	
3) Frequency (Hz)	
4) Manufacturer	

##### (3) Environmental equipment (Specify if provided or planned, and type)

1) Desulfurization system	
2) Denitration system	
3) Electric dust collector	
4) Wastewater treatment system	
5) Water purifier	
6) Other environmental facilities	

**Closing date: May 9, 2009**

The JFY2008 Training Course in Thermal Power Engineering  
– for Gas Turbine and Coal Fired Steam Turbine Power Generation –

**[Steam Turbine (Coal) Course]**

\*If you can bring any brochures or relevant documents which include the data, you do not need to fill out the following tables.

1. Information related to your steam (coal) turbine plant

(1) Turbine system of your power plant or a typical plant

1) Type	
2) Capacity (kW)	
3) Duration of operation (number of years)	
4) Pressure (Pa)	
5) Temperature (C)	
6) Speed (rpm)	
7) Installed site (indoor or outdoor)	
8) Cooling method (air-cooling or water-cooling) + vacuum (mmHg)	
9) Turbine efficiency (%)	
10) Manufacturer	

(2) Boiler specification

1) Type	
2) Capacity (t/h)	
3) Duration of operation(number of years)	
4) Pressure (Pa)	
5) Temperature (C)	
6) Heating area (m2)	
7) Fuel used (kind, calorie)	
8) Kind of burner (combustion method)	
9) Installed site (indoor or outdoor)	
10) Boiler efficiency (%)	
11) Manufacturer	

(3) Generator specification

1) Capacity (kVA)	
2) Voltage (kV)	
3) Frequency (Hz)	
4) Manufacturer	

(4) Environmental equipment (Specify if provided or planned, and type)

1) Desulfurization system	
2) Denitration system	
3) Electric dust collector	
4) Wastewater treatment system	
5) Water purifier	
6) Other environmental facilities	



## Country Report (Part-2)

ANNEX-5

**Closing date: May 9, 2009**

\*If you can bring any annual reports or statistics papers that include the data, you do not need to fill out tables as follows.

1. Outline of electric power sector in your country (Year: \_\_\_\_\_)

Generating Facilities	Generating Capacity [Installed] (MW) *1	Hydro		
		Thermal		
		Nuclear		
		Others *2		
		Total		
	Thermal Efficiency of Coal based Power plants (Gross) (%)			
	Generating Capacity [Planned] (MW)	Year		
		Hydro		
		Thermal		
		Nuclear		
Others *2				
Demand & Supply	Gross Electric Power Production (GWh) *3	Hydro		
		Thermal		
		Nuclear		
		Others *2		
		Total		
	Electric Power Sales (GWh)	Residential		
		Commercial		
		Industrial		
		Others		
		Total		
Peak Load (MW) *4				
Growth Rates of Peak Load (%)				
Interchange of Electricity (GWh) *5	Export			
	Import			
T&D Facilities	Transmission Line Route Length (km)	200kV or over		
		under 200kV		
		Total		
	Distribution Line Route Length (km)	High Voltage		
		Low Voltage		
Total				
Transmission & Distribution Loss (%) *6				
Others	Total Minutes of Outage per Customer *7			
	Electricity Rates (nat.cur./kWh) *8			
	Electrification Ratio (%) *9			

\*1 Includes major electric power utilities and IPP's, excludes industry owned power.

\*2 Geothermal, New and Renewable Energy.

\*3 Major electric power utilities and IPP's.

\*4 Day's highest daily loads.

\*5 Interchange electricity through transmission line only.

\*6 Includes Non-Technical Loss.

\*7 Total minutes of scheduled and unplanned outages per low-voltage customer.

\*8 Calculated by (Power Sales Revenue / Electric Power Sales).

\*9 Calculated by (the number of customer / the number of household).

## ***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 developmental objectives.



***CORRESPONDENCE***

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

**JICA Chugoku International Center (JICA CHUGOKU)**  
**Address: 3-3-1 Kagamiyama, Higashihiroshima, Hiroshima, 739-0046 Japan**  
TEL: 81-82-421-5800 FAX: 81-82-420-8082

## Guidelines of Application Form for the JICA Training and Dialogue Program

The attached form is to be used to apply for the training and dialogue programs of the Japan International Cooperation Agency (JICA), which are implemented as part of the Official Development Assistance Program of the Government of Japan. Please complete the application form while referring to the following and consult with the respective country's JICA Office - or the Embassy of Japan if the former is not available - in your country for further information.

### 1. Parts of Application Form to be completed

#### 1) Which part of the form should be submitted?

It depends on the type of training and dialogue program you are applying for.

##### >Application for Group and Region Focused Training Program

Official application and Parts A and B must be submitted.

##### >>Application for Country Focused Training Program including Counterpart Training Program

Part B will be submitted. Official application and Part A need not to be submitted

#### 2) How many parts does the Application Form consist of?

The Application Form consists of three parts as follows;

##### **Official Application**

This part is to be confirmed and signed by the head of the relevant department/division of the organization which is applying.

##### **Part A. Information on the Applying Organization**

This part is to be confirmed by the head of the relevant department/division of the organization which is applying.

##### **Part B. Information About the Nominee**

This part is to be completed by the person who is nominated by the organization applying.

The applicants for Group and Region Focused Training Program are required to fill in every item. As for the applications for Country Focused Training Program including Counterpart Training Program and some specified International Dialogue Programs, it is required to fill in the designated “**required**” items as is shown on the Form.

Please refer to the General Information to find out which type the training and dialogue program that your organization applies for belongs to.

### 2. How to complete the Application Form

In completing the application form, please be advised to:

- (a) carefully read the General Information (GI) for which you intend to apply, and confirm if the objectives and contents are relevant to yours,
- (b) be sure to write in the title name of the course/seminar/workshop/project accurately according to the GI, which you intend to apply,
- (c) use a typewriter/personal computer in completing the form, of which the electronic

version is available on the web site: <http://www.jica.go.jp/> \_\_\_\_\_, or write in **block letters**,

- (d) fill in the form in **English**,
- (e) use  or “x” to fill in the ( ) check boxes,
- (f) attach a picture of the Nominee,
- (g) attach additional page(s) if there is insufficient space on the form,
- (h) prepare the necessary document(s) described in the General Information (GI), and attach it (them) to the form,
- (i) confirm the application procedure stipulated by your government, and
- (j) submit the original application form with the necessary document(s) to the responsible organization of your government according to the application procedure.

Any information that is acquired through the activities of the Japan International Cooperation Agency (JICA), such as the nominee’s name, educational record, and medical history, shall be properly handled in view of the importance of safeguarding personal information.

### **3. Privacy Policy**

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#### **1) Scope of Use**

Any information used for identifying individuals that is acquired by JICA will be stored, used, or analyzed only within the scope of JICA activities. JICA reserves the right to use such identifying information and other materials in accordance with the provisions of this privacy policy.

#### **2) Limitations on Use and Provision**

JICA shall never intentionally provide information that can be used to identify individuals to any third party, with the following three exceptions:

- (a) In cases of legally mandated disclosure requests;
- (b) In cases in which the provider of information grants permission for its disclosure to a third party;
- (c) In cases in which JICA commissions a party to process the information collected; the information provided will be within the scope of the commissioned tasks.

#### **3) Security Notice**

JICA takes measures required to prevent leakage, loss, or destruction of acquired information, and to otherwise properly manage such information.

## Application Form for the JICA Training and Dialogue Program

### OFFICIAL APPLICATION

(to be confirmed and signed by the head of the relevant department / division of the applying organization)

**1. Title:** (Please write down as shown in the General Information)

--

**2. Number:** (Please write down as shown in the General Information)

J	0		-					
---	---	--	---	--	--	--	--	--

**3. Country Name:**

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**4. Name of Applying Organization:**

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**5. Name of the Nominee(s):**

1)	3)
2)	4)

Our organization hereby applies for the training and dialogue program of the Japan International Cooperation Agency and proposes to dispatch qualified nominees to participate in the programs.

Date:		Signature:	
Name:			
Designation / Position			Official Stamp
Department / Division			
Office Address and Contact Information	Address:		
	Telephone:	Fax:	E-mail:

**Confirmation by the organization in charge (if necessary)**

I have examined the documents in this form and found them true. Accordingly I agree to nominate this person(s) on behalf of our government.

Date:		Signature:	
Name:			
Designation / Position			Official Stamp
Department / Division			

## Part A: Information on the Applying Organization

(to be confirmed by the head of the department / division)

### 1. Profile of Organization

1) Name of Organization:

2) The mission of the Organization and the Department / Division:

### 2. Purpose of Application

1) Current Issues: Describe the reasons for your organization claiming the need to participate in the training and dialogue program, with reference to issues or problems to be addressed.

2) Objective: Describe what your organization intends to achieve by participating in the training and dialogue program.

**3) Future Plan of Actions: Describe how your organization shall make use of the expected achievements, in addressing the said issues or problems.**

**4) Selection of the Nominee: Describe the reason(s) the nominee has been selected for the said purpose, referring to the following view points; 1) Course requirement, 2) Capacity /Position, 3) Plans for the candidate after the training and dialogue program, 4) Plan of organization and 5) Others.**



## Part B: Information about the Nominee

(to be completed by the Nominee)

NOTE>>>The applicants for Group and Region Focused Training Program are required to fill in "Every Item". As for the applications for Country Focused Training Program including Counterpart Training Program and some specified International Dialogue Programs, it is required to fill in the designated "required" items as is shown below.

**1. Title:** (Please write down as shown in the General Information) **(required)**

**2. Number:** (Please write down as shown in the General Information) **(required)**

J	0		-						
---	---	--	---	--	--	--	--	--	--

**Attach the nominee's photograph (taken within the last three months) here**  
Size: 4x6  
(Attach to the documents to be submitted.)

**3. Information about the Nominee(nos. 1-9 are all required)**

**1) Name of Nominee (as in the passport)**

**Family Name**

**First Name**

**Middle Name**

<b>2) Nationality (as shown in the passport)</b>		<b>5) Date of Birth (please write out the month in English as in "April")</b>				
<b>3) Sex</b>	( ) Male	( ) Female	<b>Date</b>	<b>Month</b>	<b>Year</b>	<b>Age</b>
<b>4) Religion</b>						

**6) Present Position and Current Duties**

Organization							
Department / Division							
Present Position							
Date of employment by the present organization	Date	Month	Year	Date of assignment to the present position	Date	Month	Year

**7) Type of Organization**

( ) National Governmental	( ) Local Governmental	( ) Public Enterprise
( ) Private (profit)	( ) NGO/Private (Non-profit)	( ) University
( ) Other ( )		

**8) Outline of duties: Describe your current duties**

**9) Contact Information**

Office	Address:	
	TEL:	Mobile (Cell Phone):
	FAX:	E-mail:
Home	Address:	
	TEL:	Mobile (Cell Phone):
	FAX:	E-mail:
Contact person in emergency	Name:	
	Relationship to you:	
	Address:	
	TEL:	Mobile (Cell Phone):
	FAX:	E-mail:

**10) Others (if necessary)**

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**4. Career Record**

**1) Job Record (After graduation)**

Organization	City/ Country	Period		Position or Title	Brief Job Description
		From Month/Year	To Month/Year		

**2) Educational Record (Higher Education)(required)**

Institution	City/ Country	Period		Degree obtained	Major
		From Month/Year	To Month/Year		

**3) Training or Study in Foreign Countries; please write your past visits to Japan specifically as much as possible, if any.**

Institution	City/ Country	Period		Field of Study / Program Title
		From Month/Year	To Month/Year	

**5. Language Proficiency (required)**

1) Language to be used in the program (as in GI)					
Listening	( ) Excellent	( ) Good	( ) Fair	( ) Poor	
Speaking	( ) Excellent	( ) Good	( ) Fair	( ) Poor	
Reading	( ) Excellent	( ) Good	( ) Fair	( ) Poor	
Writing	( ) Excellent	( ) Good	( ) Fair	( ) Poor	
Certificate (Examples: TOEFL, TOEIC)					
2) Mother Tongue					
3) Other languages ( )		( ) Excellent	( ) Good	( ) Fair	( ) Poor

<sup>1</sup> Excellent: Refined fluency skills and topic-controlled discussions, debates & presentations. Formulates strategies to deal with various essay types, including narrative, comparison, cause-effect & argumentative essays.

<sup>1</sup> Good: Conversational accuracy & fluency in a wide range of situations: discussions, short presentations & interviews. Compound complex sentences. Extended essay formation.

<sup>1</sup> Fair: Broader range of language related to expressing opinions, giving advice, making suggestions. Limited compound and complex sentences & expanded paragraph formation.

<sup>1</sup> Poor: Simple conversation level, such as self-introduction, brief question & answer using the present and past tenses.

## 6. Expectation on the applied training and dialogue program

1) **Personal Goal:** Describe what you intend to achieve in the applied training and dialogue program in relation to the organizational purpose described in Part A-2.

--

2) **Relevant Experience:** Describe your previous vocational experiences which are highly relevant in the themes of the applied training and dialogue program. (required)

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3) **Area of Interest:** Describe your subject of particular interest with reference to the contents of the applied training and dialogue program. (required)

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### \*7. Declaration (to be signed by the Nominee) (required)

I certify that the statements I made in this form are true and correct to the best of my knowledge.

If accepted for the program, I agree:

- (a) not to bring or invite any member of my family (except for the program whose period is one year or more),
- (b) to carry out such instructions and abide by such conditions as may be stipulated by both the nominating government and the Japanese Government regarding the program,
- (c) to follow the program, and abide by the rules of the institution or establishment that implements the program,
- (d) to refrain from engaging in political activity or any form of employment for profit or gain,
- (e) to return to my home country at the end of the activities in Japan on the designated flight schedule arranged by JICA,
- (f) to discontinue the program if JICA and the applying organization agree on any reason for such discontinuation.
- (g) to consent to waive exercise of my copyright holder's rights for documents or products that are produced during the course of the project, against duplication and/or translation by JICA, as long as they are used for the purposes of the program.

Date:	Signature:
	Print Name:

## MEDICAL HISTORY AND EXAMINATION

### 1. Present Status

(a) Do you currently use any drugs for the treatment of a medical condition? (Give name & dosage.)

( ) No	( ) Yes >> Name of Medication ( _____ ), Quantity ( _____ )
--------	---

(b) Are you pregnant?

( ) No	( ) Yes ( _____ months )
--------	--------------------------

(c) Are you allergic to any medication or food?

( ) No	( ) Yes >>> ( ) Medication	( ) Food	( ) Other:
--------	----------------------------	----------	------------

(d) Please indicate any needs arising from disabilities that might necessitate additional support or facilities.

( _____ )
<i>Note: Disability does not lead to exclusion of persons with disability from the program. However, upon the situation, you may be directly inquired by the JICA official in charge for a more detailed account of your condition.</i>

### 2. Medical History

(a) Have you had any significant or serious illness? (If hospitalized, give place & dates.)

Past:	( ) No	( ) Yes >> Name of illness ( _____ ), Place & dates ( _____ )
Present:	( ) No	( ) Yes >> Present Condition ( _____ )

(b) Have you ever been a patient in a mental hospital or been treated by a psychiatrist?

Past:	( ) No	( ) Yes >> Name of illness ( _____ ), Place & dates ( _____ )
Present:	( ) No	( ) Yes >> Present Condition ( _____ )

(c) High blood pressure

Past:	( ) No	( ) Yes
Present:	( ) No	( ) Yes >> Present Condition ( _____ ) mm/Hg to ( _____ ) mm/Hg

(d) Diabetes (sugar in the urine)

Past:	( ) No	( ) Yes
Present:	( ) No	( _____ ) Yes >> Present Condition ( _____ )
Are you taking any medicine or insulin?		( ) No ( ) Yes

(e) Past History: What illness(es) have you had previously?

( ) Stomach and Intestinal Disorder	( ) Liver Disease	( ) Heart Disease	( ) Kidney Disease
( ) Tuberculosis	( ) Asthma	( ) Thyroid Problem	
( ) Infectious Disease >>> Specify name of illness ( _____ )			
( ) Other >>> Specify ( _____ )			

(e') Has this disease been cured?

( ) Yes	( ) No (Specify name of illness)
	Present Condition: ( _____ )



**3. Other: Any restrictions on food and behavior due to health or religious reasons?**

--

I certify that I have read the above instructions and answered all questions truthfully and completely to the best of my knowledge.

I understand and accept that medical conditions resulting from an undisclosed pre-existing condition may not be financially compensated by JICA and may result in termination of the program.

Date:	Signature:
	Print Name: