

No.12040/27/2013-FTC (Trg.)  
 Government of India  
 Ministry of Personnel, Personnel Grievances and Pensions  
 Department of Personnel and Training  
 [Training Division]

Block-4, Old JNU Campus  
 New Mehrauli Road, New Delhi-67  
 Dated 22<sup>nd</sup> May, 2013

### TRAINING CIRCULAR

Subject: Group Training Course in Energy Conservation Technology & Machine Condition Diagnosis Technique for Productivity Enhancement and Cleaner Production (A) to be held from August 11, 2013 to November 07, 2013 under the Technical Cooperation Programme of the Government of Japan

The undersigned is directed to state that the Japan International Cooperation Agency (JICA) has invited applications for the above mentioned training programme to be held in Japan as per the above schedule under the Technical Cooperation of the Government of Japan.

2. The programme aims to enhance participants' capacity in energy conservation technology and machine condition diagnosis techniques in order to execute energy conservation activities which will be done through lectures, observations, practices and site visits covering Japan's energy saving technologies in each industrial sector and energy management and diagnosis techniques. This course is intended to train participants with the aspect of Energy Conservation by best use of equipment. This course is designed for engineers at practical level in governmental organization, public or private company in charge of energy audit and energy conservation activities.

3. The expected nominees should be engineer at practical level who works in private or public enterprises, or technical officials in charge of energy management, audit and diagnosis and education for energy conservation with over 5 years experience

- be a university graduate majored in engineering or equivalent,
- be competent in spoken and written English (this programme includes active participation in discussions and action plan development). Copy of official certificate for English ability is preferable,
- be in good health, both physically and mentally,
- not be a part of military service

4. The course covers

- the cost of a round-trip air ticket between international airport designated by JICA,
- travel insurance from the time of arrival in Japan to departure from Japan,
- allowances for (accommodation, living expenses, outfit and shipping),
- expenses for JICA study tours and free medical care for participants who may fall ill after reaching Japan (costs relating to pre-existing illness, pregnancy, or dental treatment are not included)

5. In addition, the following information in respect of the nominated officers may please be mentioned while furnishing the nomination:

- a) Whether attended any foreign training programme in the past? If so, the duration/detail thereof;
- b) Whether cleared from vigilance angle?
- c) Age;
- d) Whether working in North East State/J&K;
- e) A brief in 50-100 words justifying the nomination.

6. It is requested that the nomination of suitable candidates may please be forwarded (in duplicate) in JICA's prescribed form (available in [persmin.nic.in](http://persmin.nic.in)→DOPT→Training Wing→Circular→JICA) to this Department duly authenticated by the HOD of the concerned department in accordance with the eligibility criteria.

7. The applications should reach this Department through the Administrative Ministry/State Government not later than **June 04, 2013**. Nominations received after the prescribed date will not be considered. The details of the programme may be drawn from Ministry of Personnel, Public Grievances and Pensions website ([persmin.nic.in](http://persmin.nic.in)).

(N.K. Wadhwa)

Under Secretary to the Government of India  
Tele.No.011-26165682

Copy to:

- a) The Secretary, Ministry of Power, Shram Shakti Bhawan, New Delhi
- b) All State Governments/Union Territories(with request to circulate the same amongst their related Departments/Organizations).
- c) NIC with request to post the circular along with the JICA's circular on this Department's website.

o/c

24/5  
जारी किया  
ISSUED



No.23/GT-CP/2013

March 15, 2013

Mr. N.K. Wadhwa  
Under Secretary (Training)  
Department of Personnel and Training  
Training Division  
Block No. 4  
Old JNU Campus  
New Mehrauli Road  
New Delhi

**Subject: Group Training Course in Energy Conservation Technology & Machine Condition  
Diagnosis Technique for Productivity Enhancement and Cleaner Production (A)**

Dear Mr. N. K. Wadhwa,

We would like to inform you that the captioned Group Training Course will be held in Japan from August 11, 2013 to November 07, 2013 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 June 11, 2013:-

- (1) The Application Form together with the medical history questionnaire
- (2) The desired Job Report
- (3) The desired Issue Analysis Sheet

Further details are available in the General Information Booklet. It may be noted that the desired Job Report and Issue Analysis Sheet are essential for screening of applications.

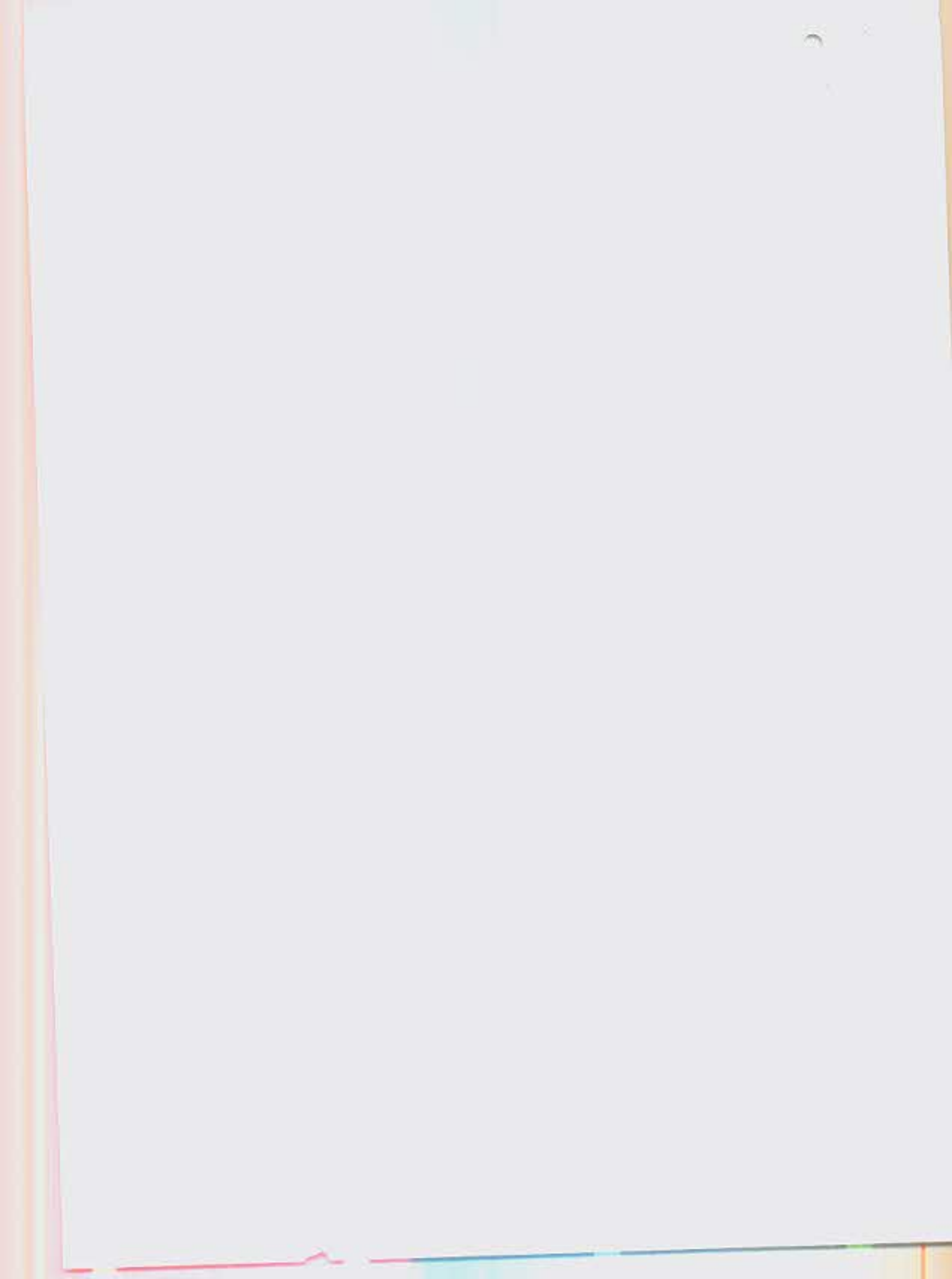
It is further informed that 12 slots are available globally for the above course and it would be much appreciated if you could take further necessary action and submit the nomination(s) of suitable candidate(s) to this office by the designated date.

With regards,

Yours sincerely,

  
Tomohide Ichiguchi  
Senior Representative

Encl: As stated above.





# TRAINING AND DIALOGUE PROGRAMS

## GENERAL INFORMATION

**Energy Conservation Technology and Machine Condition  
Diagnosis Technique(A)**

**– for Productivity Enhancement and Cleaner Production –**

**地域別研修「省エネルギー技術と設備診断**

**—生産性向上とクリーナープロダクションのために— (A) 」**

**JFY 2013**

**<Type: Solution Creation / 課題解決促進型>**

**NO. J13-04047 / ID 1384319**

**From August 11, 2013 to November 7, 2013**

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

Economic development has led to a rapidly-increasing demand for energy especially in developing countries of Asia, Middle East and Southeast Europe. On the other hand, promoting measures to conserve energy is an urgent matter for those countries since energy efficiency and energy supply are limited compared with western countries.

Although energy law system is being formulated in those countries, it is an urgent task to develop human resources such as engineers at practical level for operating the regulations into energy conservation.

Japan has a high level of expertise in energy saving triggered by an experience of the oil crises in 1970's. "Energy Saving" which basically means promotion of the reasonable and efficient energy usage, aims to not only reduce the use of energy and improve consumption rates but also stimulate the global economy through enhancement of energy efficiency in the economy as a whole.

We hope that the promotion of energy saving measures in developing countries through the transfer of the Japan's technology introduced in this training program will help enhance productivity and achieve cleaner production solving common issues of global warming and environmental pollution.

## For what?

This program aims to enhance participants' capacity in energy conservation technology and machine condition diagnosis techniques in order to execute energy conservation activities.

## For whom?

This program is designed for engineers at practical level in governmental organization, public or private company in charge of energy audit and energy conservation activities.

## How?

This program consists of lectures, practices and site visits covering Japan's energy saving policies, energy saving technologies in each industrial sector, and energy management and diagnosis techniques. Participants will also learn Machine Condition Diagnosis Techniques (MCDT) and measures for maintenance engineering, so that they could acquire necessary technology for efficiency promotion by combination of energy conservation technology and maintenance. This course is intended to train participants with the aspect of "Energy Conservation by best use of equipment". We have various networks with companies in Kitakyushu which have plenty of experience in energy conservation activities.

## II. Description

### 1. Title (J-No.):

Energy Conservation Technology and Machine Condition Diagnosis Technique (A)  
- for Productivity Enhancement and Cleaner Production - (J13-04047)

### 2. Period of program

Duration of whole program: June 2013 to February 2014

Preliminary Phase: June 2013 to August 2013

Core Phase in Japan: August 11, 2013 to November 7, 2013

Finalization Phase: November 2013 to February 2014

### 3. Target Regions or countries

Algeria, China, India, Indonesia, Kosovo, Serbia, Thailand, Turkey, and Ukraine

### 4. Eligible/Target Organization

This course is mainly designed for governmental organization, public or private company in charge of energy audit and energy conservation activities.

### 5. Total Number of Participants

12 participants

### 6. Language to Be Used in This Program

English

### 7. Program Objective

Participant's capacity on energy conservation technology and machine condition diagnosis techniques is improved, and practical action plan for solving problems on energy conservation is formulated in their organization.

### 8. Overall Goal

Capacity of participant's organization on energy conservation technology and machine condition diagnosis techniques is developed, and practical action plan for energy conservation is implemented, and energy conservation activities are promoted.



## 9. Expected Module Output and Contents

**(1) Preliminary Phase in a participant's home country**  
 (June 2013 to August 2013)  
*Applying organizations are required to submit Job Report and the Issue Analysis Sheet (IAS) together with the application form for selection in Japan.*

Expected Module Output	Activities
Job Report & IAS is formulated	Formulation and submission of the job report and the Issue Analysis Sheet(IAS) with the application form

**(2) Core Phase in Japan**  
 (August 11, 2013 to November 7, 2013)  
*Participants dispatched by the organizations to attend the Program implemented in Japan.*

Expected Module Output	Subjects/Agendas	Methodology
1) To be able to identify and explain problems for promotion of energy conservation in participants organization by understanding basis of module 2, 3 and 4 such as Japan's national energy policy and methods of energy diagnosis.	<p><b>Energy Conservation Policy &amp; Way to Energy Diagnosis</b></p> <p><b>Lectures</b></p> <p>(1) The energy law system in Japan            (2) Japan system &amp; history of energy management            (3) Energy conservation policy in Japan            (4) New energy policy in Japan            (5) Trend of energy efficient and policy and technology development system            (6) Energy conservation policy for buildings &amp; houses            (7) Energy conservation policy for small &amp; medium sized enterprises            (8) Public facility visit –Eco Town –            (9) Visit –Environment Museum –</p> <p><b>Way to Energy Conservation Activities</b></p> <p>(10) The way to energy diagnosis            (11) Daily activities on production site for energy saving            (12) 7 tools for "Kaizen"            (13) Standard for energy management</p>	<p>Lecture            Site Visit            Practice</p>



<p>2) To be able to apply theory of energy-intensive equipments and energy conservation technologies to energy conservation diagnosis and energy management.</p>	<p><b>Outline of Energy Conservation Technology Theory</b></p> <p><b>Lectures</b></p> <p>(1) Fundamentals of energy conservation technique</p> <p>(2) Outline of energy conservation technique</p> <p>(3) Energy Conservation way – Fluid Machine</p> <p>(4) Energy Conservation way – Heat &amp; Steam</p> <p>(5) Energy Conservation way – Air Conditioning</p> <p>(6) Unit &amp; basic technique of steam</p> <p>(7) Basic of boiler</p> <p>(8) Energy saving of lighting equipment</p> <p>(9) Energy saving of air conditioning system</p> <p>(10) Basic of Inverter</p> <p>(11) Energy Saving Technology by Inverter</p> <p>(12) Combustion Calculation Method</p> <p>(13) Basic of steam &amp; steam trapping</p> <p>(14) Measuring of efficiency &amp; energy saving of pump</p> <p>(15) Power transmission &amp; distribution</p> <p>(16) Energy conservation example –Kyushu Power Co. International Unit</p> <p><b>Practice and Field Study</b></p> <p>(17) Exercises of lighting equipment</p> <p>(18) Practice of inverter basic</p> <p>(19) Exercise &amp; practice of energy saving by inverter</p> <p>(20) Visit energy saving building</p> <p>(21) Visit TOTO – Visualizing for energy conservation</p> <p>(22) Visit refuse incinerator</p> <p>(23) Exercise of combustion calculation</p> <p>(24) Practice of steam trap</p> <p>(25) Practice of measuring of pump efficiency</p> <p>(26) Practice of heat balance at heating furnace</p> <p>(27) Practice of pump &amp; compressor</p> <p>(28) Visit cement plant, refuse incinerator,</p>	<p>Lecture</p> <p>Exercise</p> <p>Practice</p> <p>Field Study</p>
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<p>3) To be able to utilize machine condition diagnosis techniques(MCDT) to energy conservation activities and maintenance by acquiring MCDT in practice and outline of maintenance management.</p>	<p><b>Outline of Condition diagnosis techniques and maintenance management</b></p> <p><b>Lecture</b></p> <p>(1) Outline of CDT (Condition Diagnosis Techniques)</p> <p>(2) Explanation of CDT system</p> <p>(3) Basic &amp; recent CDT technique for electric machinery</p> <p>(4) Vibration Measurement &amp; analysis</p> <p>(5) CDT for Rotating Machinery</p> <p>(6) CDT for Shaft Bearing</p> <p>(7) Diagnosis Method of Gear apparatus</p> <p>(8) CDT using thermograph</p> <p>(9) Viewpoint for introduction of CDT tools</p> <p>(10) Example of CDT application</p> <p>(11) Tribology based Diagnosis Technology</p> <p>(12) Plant maintenance management</p> <p><b>Exercise &amp; Field Study</b></p> <p>(13) Practice of CDT for Rotating Machine</p> <p>(14) Practice of CDT for Shaft Bearing</p> <p>(15) Practice of CDT for Gear Apparatus</p> <p>(16) Practice of alignment by laser</p> <p>(17) Practice of Non-destructive Inspection</p>	<p>Lecture</p> <p>Exercise</p> <p>Field Study</p>
<p>4) Action Plan is presented by applying energy conservation technologies and MCDT aquired in the training.</p>	<p><b>Action Plan</b></p> <p>(1) Guidance to awareness of issues</p> <p>(2) Evaluation Meeting</p> <p>(3) Preparing action plan</p> <p>(4) Presentation of Action Plan</p>	<p>Lecture</p> <p>Discussion</p> <p>Self-study</p>

**(3)Finalization Phase in a participant's home country**

(November 2013 to February 2014)

*Participating organizations produce final outputs by making use of results brought back by participants. This phase marks the end of the Program.*

Expected Module Output	Activities
<p>To discuss and promote the action plans in the participants' organizations.</p>	<p>Application and implementation of the action plan back in the participant's country.</p>



### III. Conditions and Procedures for Application

#### 1. Expectations for the Participating Organizations:

- Program
- (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. These special features enable the project 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 submitting applications to Japan.
  - (4) Participating organizations are also expected to make the best use of the results achieved by their participants in Japan.

#### 2. Nominee Qualifications:

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

##### (1) Current Duties:

Engineers at practical level who works in private or public enterprises, or technical officials in charge of energy management, audit and diagnosis and education for energy conservation with over 5 years experiences.

##### (2) Educational Background:

Be university graduate, majored in engineering, or equivalent.

##### (3) Language:

Be competent in spoken and written English

(This program includes active participation in discussions and action plan development, thus requires high competence of English. Please attach an official certificate for English ability)

##### (4) Health: must be in good health, both physically and mentally, to participate in the Program in Japan

##### (5) Must not be serving any form of military service.

#### 3. Required Documents for Application:

##### (1) Application Form:

The Application Form is available at the respective country's JICA office or Embassy of Japan.



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**\*Pregnancy**

Pregnant participants are strictly requested to attach the following documents in order to minimize the risk for their health.

- ① letter of the participant's consent to bear economic and physical risks
- ② letter of consent from the participant's supervisor
- ③ doctor's letter with agreement of his/her training participation.

Please ask National Staffs in JICA office for the details.

**(2) Job Report and Issue Analysis Sheet (IAS):**

To be submitted with the application form. Job Report and IAS are necessary documents for screening of applicants and each applicant is required to submit his/her Job Report and IAS together with Application Form. The documents should be completed in accordance with descriptions of Annex-2(Job Report), Annex-3(IAS). Each applicant should submit his/her IAS with approval of superior. The IAS without approval of applicant's superior is not accepted.

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

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

Closing date for application to the JICA Center in JAPAN: June 11, 2013.

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 documents 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 project. 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 July 11, 2013.

**5. Conditions for Attendance:**

- (1) to follow 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 organ.

- (6) 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.
- (7) to observe the rules and regulations of their place of accommodation and not to change the accommodation designated by JICA; and
- (8) to participate the whole program including a preparatory phase prior to the program in Japan. Applying organizations are expected to carry out the actions described in section II -9 and section III-3.

## IV. Administrative Arrangements

### 1. Organizer:

- (1) Name : JICA KYUSHU (Training Program Division)
- (2) Person in charge [kictp@jica.go.jp](mailto:kictp@jica.go.jp)

### 2. Implementing Partner:

- (1) Name : Kitakyushu International Techno-cooperative Association (KITA)
- (2) Course Leader : Dr. Takatsugu Ueyama
- (3) URL : [http://www.kita.or.jp/english/e\\_index.html](http://www.kita.or.jp/english/e_index.html)
- (4) Remark

KITA has carried out JICA training programs since 1980, and over the period from FY1980 to 2012. The training programs cover environmental policies, promotion of a recycling-oriented society, production techniques and facility maintenance as well as programs related to the improvement of work training management ability.

### 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 Kyushu International Center (JICA KYUSHU)

Address: 2-2-1 Hirano, Yahata Higashi-ku, Kitakyushu City,  
Fukuoka Prefecture, Japan 805-8505

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)

URL: <http://www.jica.go.jp/kyushu/index.html>

If there is no vacancy at JICA KYUSHU, 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 program, and other matters.

## V. Other Information

### 1. Reports and Presentation:

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

Each applicant is required to submit his/her own Job Report & Issue Analysis Sheet following the instruction. 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.

#### (2) Action Plan

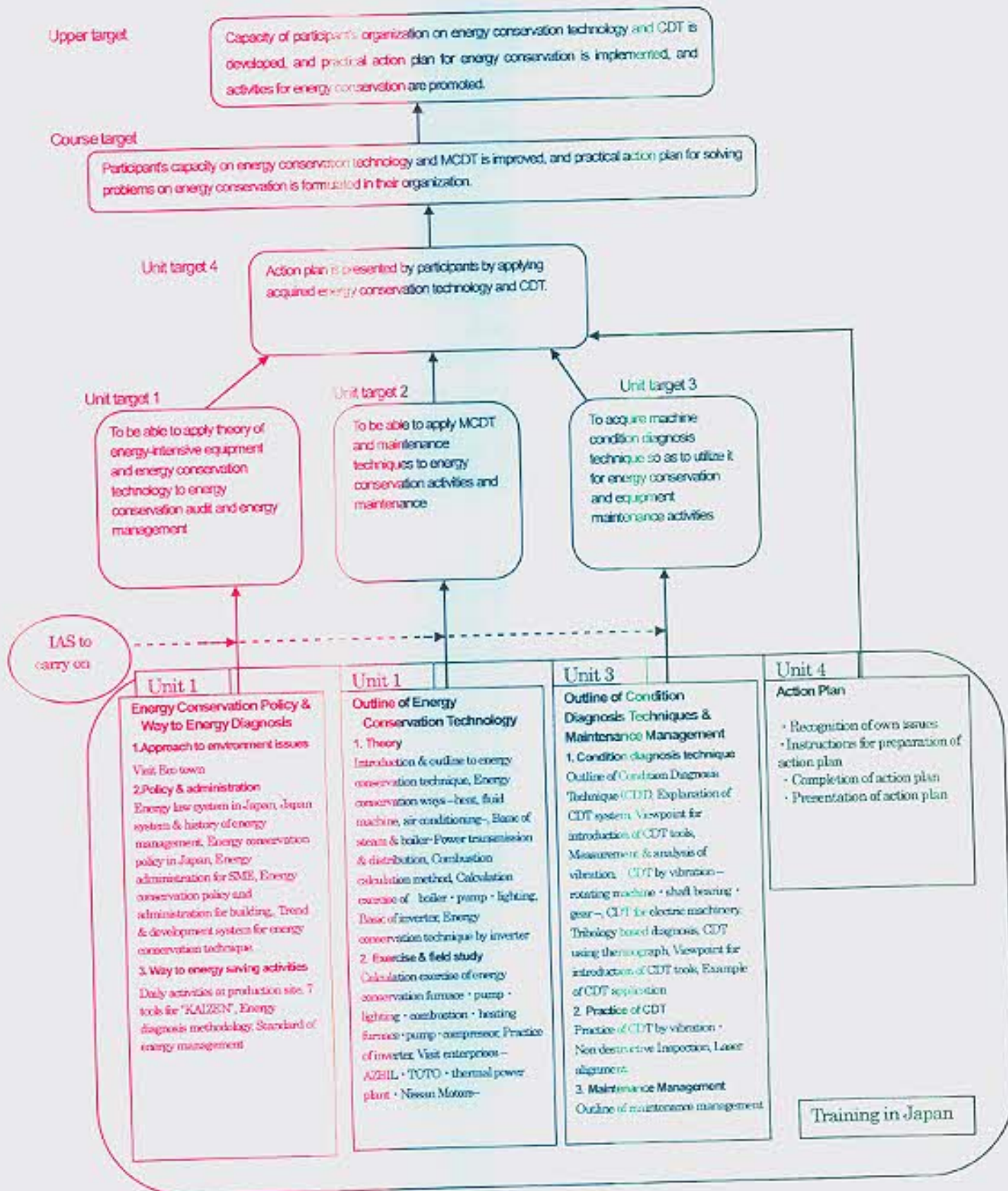
Participants are required to make an Action Plan at the end of the training in Japan to express your idea and plan which you carry out after your return, reflecting the knowledge and method you acquire from the training. Each person will have 10 minutes for presentation.

### 2. Remarks:

JICA training is implemented for the purpose of development of human resources who will promote the advancement of the countries, but not for the enrichment of individuals or private companies. Matters of a trade secret and patent techniques will remain confidential and inaccessible during the training.

## Annex 1 Concept Diagram of the Course

### JICA Training on Energy Conservation Technology and Condition Diagnosis Technique





**Annex 2**

**Energy Conservation Technology and Machine Condition Diagnosis Technique(A)  
Job Report**

Name:  
Country:  
Organization and present post:  
E-mail:

- Remarks 1:** The Report should be typewritten in English (12-point font, A4 size paper), and total pages of the report should be limited to 4 pages (not including organization chart).
- Remarks 2:** Each participant is required to have presentation in 10 minutes based on this Job Report and IAS at the early stage of the training for the purpose of making the training more effective and fruitful by comprehending the situations and problems of the participants each other.
- Remarks3:** Please itemize your answer and make them specific.

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

- Primary energy consumption rate (circle graph)
- Energy self sufficient rate
- Electric power consumption rate (circle graph)
- Electrification cover rate
- 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.  
(The chart should be attached and not be counted in this page limit.)  
Please describe a duty of each department (section) briefly.
  
- (3) Brief description of your assignments.

15  
(4) 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 (in section II, page 5) 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".

If your answer "Yes", please fill in "Years" column as to the length of your application on the respective items.

	Yes	No	Years
1)Energy Management			
2)Heat engine or heat furnace			
3)Fan, blower or pump			
4)Inverter system			
5)Lighting in plant			
6)Power transmission & distribution			
7)Air Conditioning System			
8)Machine condition diagnosis technique(MCDT)by analysis of vibration			
9)MCDT of Electric Machinery			
10)Thermograph			
11) Steam System			
12) Other			

Under "12) Other", please specify subject associated with energy saving technique, not covered by any of the items "1" to "11"



Annex-3

**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 challenges to be covered in each expected module output and to formulate solutions to them.
- (3) The sheet is to be utilized as a logical process control sheet to draw up improvement plans for the issues by filling out the sheet in phases from prior to the nominee's arrival through to the end of the training.
- (4) In addition, it is used for the course leader and lecturers to understand the issues that each participant is facing, and provide him/her with technical advice, useful references and solutions through the training program in Japan.

**2. How to fill out IAS?**

- (1) Please describe the issues your organization faces in column "A: Present situation"
  - ★ Prepare the separate rows for each problem; if necessary, please add new rows.
- (2) In column "B: Target for improvement/Necessary information", please write the desirable situation (=Target) you want to achieve as specifically as possible. If it is not easy to describe the target concretely, please write the information you need to improve the actual situation in Column "A" as detailed as possible.
- (3) Referring to the "List of Subjects" in the Annex or the tables of the General Information (Page 3~4), please extract subjects which you think are deeply related to the items you have written in column "B", and write their Subject No. in column "C:What subjects (lectures/visits) do you most expect to get the information you need? And if you have any request for this subject, please describe it.",for example;
  - 1: Interested to know the latest international discussion result
  - 2: Information on the detailed measures taken by the city
  - ★ You can input as many subjects as you think the subjects are related.
  - ★ You do not need to input "Subject Titles" into the chart, but only "Subject No."
- (4) Please leave column " E: Title of Action Plan (Not necessary before participating training course)", as this column is to be filled through the training program, following the guidance by the lectures.

**Annex-3**

**Issue Analysis Sheet (IAS) : Energy Conservation Technology and Machine Condition Diagnosis Technique(A)**

Name:

	Problems		[C] Subject No. <sup>*)</sup>	[D] Useful information you obtained through this course	[E] Title of Action Plan
	[A] Present situation	[B] Desirable situation/Target			
1					
2					
3					

[C] Please write the Subject No.<sup>\*)</sup> you most expect to get the information you need ?

<sup>\*)</sup> Please refer the Number of Subject/Agenda shown in the tables of this General Information (Page 4~6).



Annex-4 Tentative Schedule of the JICA Training Course "Energy conservation Technology and Machine Condition Diagnosis Techniques(A)"

date	Subject	date	Subject	date	Subject
8/10	General Orientation	9/10	Exercise & practice of energy saving by inverter2 visit to thermal power plant, ex: example -ashikusa power	10/10	Th Exercise of energy conservation through ex: example -essan
8/12	KIC Briefing/ Program Orientation, KITA Orientation	9/11	Wed	10/11	Fr Energy Conservation way -Heat & Steam, visit to refuse
8/13	General Orientation	9/12	Th	10/12	Sa Energy Conservation way -Heat & Steam, visit to refuse
8/14	Guidance to awareness of issues1	9/13	Fr	10/13	Su Energy Conservation way -Heat & Steam, visit to refuse
8/15	Outline of CDT, Guidance to awareness of issues 2	9/14	Sa	10/14	Mo Energy Conservation way -Heat & Steam, visit to refuse
8/16	Visit Eco Town, Global Environmental Issue	9/15	Su	10/15	Tu Energy Conservation way -Heat & Steam, visit to refuse
8/17	Energy Law System in Japan 1, Job Report Hearing	9/16	Mo	10/16	We Energy Conservation way -Heat & Steam, visit to refuse
8/18	Energy Law System in Japan 2, Example of Issue analysis	9/17	Tu	10/17	Th Practice of EC for Compressor
8/19	Trend of new energy technology & Dev. EC for Air Conditioning	9/18	We	10/18	Fr EC Example -Okin Industry, EC Example -soozma Proceed
8/20	EC way -Air Conditioning, Calculation of Boiler Efficiency	9/19	Th	10/19	Sa Energy Conservation way -Heat & Steam, visit to refuse
8/22	Calculation of Boiler Efficiency, Example of EC at Power Plant	9/20	Fr	10/20	Su Energy Conservation way -Heat & Steam, visit to refuse
8/23	Outline of Energy Conservation Technology, Maintenance	9/21	Sa	10/21	Mo Absorption refrigerating machine, Binary Generation
8/24	Energy Conservation Technology, Maintenance	9/22	Su	10/22	Tu Move from Osaka to Kitakyushu, Practice of alignment by laser
8/25	Outline of Energy Conservation Technology, Maintenance	9/23	Mo	10/23	We Diagnosis Method of Gear apparatus, Practice of CDT for Rotating Machine 5
8/26	Outline of Energy Conservation Technology, Maintenance	9/24	Tu	10/24	Th Viewpoint for introduction of CDT tools, Practice of Non-destructive Inspection
8/27	Outline of Energy Conservation Technology, Guidance to awareness of issues 1	9/25	We	10/25	Fr Practice of Non-destructive Inspection
8/28	Japan system & history of energy management 1, Practice of CDT for Rotating Machine 3	9/26	Th	10/26	Sa Energy Conservation way -Heat & Steam, visit to refuse
8/29	Japan system & history of energy management 2, Guidance to awareness of issues 2	9/27	Fr	10/27	Su Energy Conservation way -Heat & Steam, visit to refuse
8/30	A class: Practice of CDT for Rotating Machine 1, B class: Basic & recent CDT technique for electric machinery	9/28	Sa	10/28	Mo Example of CDT application, Visit to Mitsubishi Material Cement
8/31	Outline of Energy Conservation Technology, Guidance to awareness of issues 1	9/29	Su	10/29	Tu Fundamentals of energy conservation technique 1, Guidance to awareness of issues 1
9/1	Outline of Energy Conservation Technology, Guidance to awareness of issues 1	9/30	Mo	10/30	We Fundamentals of energy conservation technique 2, Guidance to awareness of issues 2
9/2	Practice of CDT for Rotating Machine1	10/1	Tu	10/31	Th Standard for energy management, Energy Conservation way - Air Conditioning
9/3	Basic & recent CDT technique for electric machinery Presentation of Job Report, Visit TOTO	10/2	We	11/1	Fr Visit to Genkei Nuclear Power, Visit to Mitsubishi Heavy Industry
9/4	Basic of Steam & Unit, Basic of Boiler	10/3	Th	11/2	Sa Energy Conservation way -Heat & Steam, visit to refuse
9/5	Introduction to Inverter, Basic of Inverter & Practice	10/4	Fr	11/3	Su Energy Conservation way -Heat & Steam, visit to refuse
9/6	EC by Inverter	10/5	Sa	11/4	Mo Energy Conservation way -Heat & Steam, visit to refuse
9/7	Exercise & practice of energy saving by inverter	10/6	Su	11/5	Tu Consultation of Action Plan, Consultation of AP Presentation
9/8	Exercise & practice of energy saving by inverter	10/7	Mo	11/6	We Evaluation Meeting, Action Plan Presentation, Closing Ceremony
9/9	Exercise & practice of energy saving by inverter	10/8	Tu	11/7	Th Departure from Kitakyushu
9/10	Exercise & practice of energy saving by inverter	10/9	We		

CDT=condition diagnosis technique, EC=Energy Conservation, EM=Energy Management.





#### **CORRESPONDENCE**

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