



【Online】 Knowledge Co-Creation Program (Group & Region Focus)

GENERAL INFORMATION ON

Promotion of Hydropower Development

課題別研修「水力開発の促進」

JFY 2021

NO. 201902104J002 / 202003157J001

Course Period in Japan: From November 4 to December 3, 2021

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

‘JICA Knowledge Co-Creation Program (KCCP)’ as a New Start

In the Development Cooperation Charter which was 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

Appropriate power development and secured power supply are essential for sustainable development for developing countries. At the same time, efforts for realization of low carbon society are also required for developing countries, after “Paris agreement” was concluded under the 21st United Nations Climate Change Conference (COP 21) in 2015. Under these circumstances, the importance of steady development of hydropower, which is stable, affordable, and low-carbon power source, has been increasing from the viewpoint of both “Energy Security” and “Climate Change Measures”.

Japan had developed hydropower on a large scale and those hydropower sources still function as national base power. Those Japanese past examples and know-how would be valuable for developing countries which are proceeding with hydro power development for their energy source.

For what?

This program aims to contribute to the steady promotion of hydropower development in participant’s home country / organization by offering and sharing them the comprehensive knowledge related to hydropower development which Japan has acquired and accumulated.

For whom?

This program is for those currently (or expected to be in the near future) posted to the managerial position in the government agencies or electric power utilities which are in charge of the hydropower development in the countries with high potential of hydropower.

How?

This program gives priority to the discussion within the participants as well as lectures. In addition, the participants will be able to have discussions with Japanese experts who have high experience in the hydropower development technology. Concrete advice and guidance would be provided to the participants in their preparation of action plan.

Sustainable Development Goals (SDGs)

The United Nations Sustainable Development Goals (SDGs) were adopted as the 2030 Agenda for Sustainable Development by world leaders in September 2015, which now call for action by all countries. As a development cooperation agency, JICA is committed to achieving the SDGs. This program, which aims at steady promotion of hydropower development, especially contributes to realizing the goal 7 and 13, by offering Japanese past examples and know-how to developing countries for realization of low carbon society.



II. Description

- 1. Title (J-No.): Promotion of Hydropower Development (201902104J002 / 202003157J001)**
- 2. Course Period in JAPAN**
November 4 to December 3, 2021
- 3. Target Regions or Countries**
Fiji, Laos, Nepal, Sri Lanka, Tajikistan, Pakistan, Lesotho, Zambia, Malawi, Democratic Republic of the Congo, Morocco, Togo, Sierra Leone
- 4. Eligible / Target Organization**
Governmental agencies or electric power utilities, which are responsible for hydropower development
- 5. Course Capacity (Upper limit of Participants)**
13 participants
- 6. Language to be used in this program:** English
- 7. Overall Goal**
To prepare plans contributing to steady promotion of hydropower development.
- 8. Course Objective:**
To obtain the knowledge and experience on hydropower development through the program and share them in participants' organization.
- 9. Outputs:**
 1. To recognize the issues related to hydropower development in the home country / organization.
 2. To understand about Japan's efforts for hydropower development together with knowledge & experience and consider these applicability to the home country.
 3. To share technical information on hydropower development among participants' countries.
 4. Based on the knowledge acquired by the participants, they prepare an action plan, which will be shared in the relevant organization for contributing to hydropower development.

Expected Module Output and Contents:

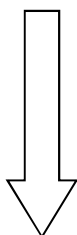
This program consists of the following components. Details on each component are given below:

(1) Preliminary Phase (Before starting the course) Participating organizations make required preparation for the Program in the respective country.	
Expected Module Output	Activities
Submission of Job Report	Preparation and submission of Job Report (See ANNEX 1) aiming to clear of participants' issues

(2) Core Phase (November 4 to December 3, 2021) Participants dispatched by the organizations attend the Program implemented in Japan.		
Expected Module Output	Subjects/Agendas (subject to minor changes)	Methodology
1) To recognize the issues related to hydropower development in the home country / organization.	(1) Presentation of Job report (aiming to share the issues among participants and select the target issue for preparation of action plan)	Presentation / Discussion
2) To understand about Japan's efforts for hydropower development together with knowledge & experience and consider these applicability to the home country.	(1) Outline of Electric Power Industry in Japan (2) Outline of hydropower Development (3) Operation and maintenance of hydropower plant (electric and civil) (4) Design of hydropower Plant (electric and civil) (5) Geological Investigation and evaluation for hydropower projects (6) Environmental Impact Assessment on Hydropower Plant (7) Project management (including IPP project) (8) Experience of J-power's experts	Live and On demand Lectures
3) To share technical information on hydropower development among participants' countries.	(1) Discussion about hydropower and action plan between participants and Japanese experts	Lecture and Discussion
4) Based on the knowledge acquired by the participants, they prepare an action plan, which will be shared in the relevant organization for contributing to hydropower development.	(1) Drawing up action plan (2) Action Plan presentation and discussion	Presentation / Discussion

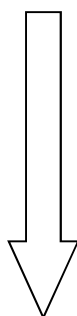
< Flow of the Program >

Presentation of Job Report (at the first stage of the program)



All participants will present your Job Report submitted to JICA in advance. This is the starting point of the program in Japan for each participant. Japanese experts will monitor your Job Report presentation, and it is very important to know other country's hydropower development situation. So please listen carefully and discuss actively.

Program

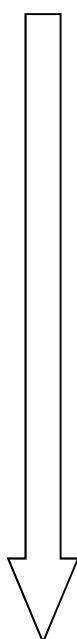


Through lectures, presentations and discussions, the participants will gain key ideas or suggestions to promote the hydropower development.

Date of your presentation

	Date	Japanese hosts/organizers
Presentation of Job Report	Nov.9 &10	JICA, JEPIC, J-POWER
Presentation of Action Plan	Dec. 2 & 3	JICA, JEPIC, J-POWER

Presentation of Action Plan (at the final stage of the program)



Upon commented by Japanese professionals in the field, participants will be requested to make up your feasible Action Plan as outcome of this program. Participants are required to write a feasible and concrete Action Plan and make a presentation at the end of the program, using Microsoft Power Point. You will receive professional review from the point of technical and economic feasibility.

The Action Plan needs to satisfy the following requirements:

- 1) Applicability of hydropower development **Procedures** lectured in Japan to your country in order to promote hydropower development in your country.
- 2) Recognition of differences of **Technology** related to hydropower plant between your countries and Japan
- 3) Action plan to disseminate knowledge obtained
(How to report in your organization, How to apply to your job, etc.)

10. Location and Time

Please refer the tentative schedule on page 14.

(1) Location

The location to take the program (On Demand/Online) will be determined by the internet environment. Please inform JICA which location you would like to take the program (e.g. home, office). If you can't find the proper place to take the program, please consult with JICA Office.

(2) Time for On Demand program:

Participants will be able to access On Demand program at any time and any place during On Demand program period.

Participants must work on assignments at home or office during this period.

(3) Time for Online program (live stream) :

The days marked "online" on the tentative schedule on page 14 are the days that the online program is offered.

On most days, the program will be live-streamed between 17:00 and 19:00 in Japan standard time (JST). The Job Report Presentation on November 9 and 10 from 17:00 to 19:30 in Japan time and the Action Plan Presentation on December 2 and 3 will be held from 17:00 to 20:00 in Japan time.

Action Plan tutorials on November 29 and 30 will be arranged on an individual basis from 14:30 to 18:00 Japan time.

The time tables for live stream programs in each participating country are as follows.

<Online program >:17:00 pm-19:00 pm (JST)

Country	live-streamed time:
Fiji	21:00 pm – 23:00 pm
Laos	15:00 pm – 17:00 pm
Nepal	13:45 pm – 17:45 pm
Sri Lanka	13:30 pm – 15:30 pm
Tajikistan	13:00 pm – 15:00 pm
Pakistan	13:00 pm – 15:00 pm
Lesotho	10:00 am – 12:00 pm
Zambia	10:00 am – 12:00 pm
Malawi	10:00 am – 12:00 pm
Democratic Republic of the Congo	9:00 am – 11:00 am
Morrocó	9:00 am – 11:00 am
Togo	8:00 am – 10:00 am
Sierra Leone	8:00 am – 10:00 am

*Regarding Fiji, it is recommended to connect from home to ensure safety as it will be held late at night. If you have any problems connecting to the Internet from home, please contact the JICA office.

< Job Report presentation>:17:00 pm -19:30 pm (JST)

Country	live-streamed time
Fiji	21:00 pm – 23:30 pm
Laos	15:00 pm – 17:30 pm
Nepal	13:45 pm – 18:15 pm
Sri Lanka	13:30 pm – 16:00 pm
Tajikistan	13:00 pm – 15:30 pm
Pakistan	13:00 pm – 15:30 pm
Lesotho	10:00 am – 12:30 pm
Zambia	10:00 am – 12:30 pm
Malawi	10:00 am – 12:30 pm
Democratic Republic of the Congo	9:00 am – 11:30 am
Morrocó	9:00 am – 11:30 am
Togo	8:00 am – 10:30 am
Sierra Leone	8:00 am – 10:30 am

< Action plan Presentation >:17:00 pm -20:00 pm (JST)

Country	live-streamed time
Fiji	21:00 pm – 24:00 pm
Laos	15:00 pm – 18:00 pm
Nepal	13:45 pm – 18:45 pm
Sri Lanka	13:30 pm – 16:30 pm
Tajikistan	13:00 pm – 16:00 pm
Pakistan	13:00 pm – 16:00 pm
Lesotho	10:00 am – 13:00 pm
Zambia	10:00 am – 13:00 pm
Malawi	10:00 am – 13:00 pm
Democratic Republic of the Congo	9:00 am – 12:00 am
Morrocó	9:00 am – 12:00 am
Togo	8:00 am – 11:00 am
Sierra Leone	8:00 am – 11:30 am

< Action Plan tutorials>. Please let us avoid schedule rearrangement requests.

Country	live-streamed time
Fiji	18:30-18:50 on Nov.29 (14:30-14:50 JST)
Laos	12:30-12:50 on Nov.30 (14:30-14:50 JST)
Nepal	11:45-12:05 on Nov.29 (15:00-15:20 JST)
Sri Lanka	11:30-11:50 on Nov.30 (15:00-15:20 JST)
Tajikistan	11:30-11:50 on Nov.29 (15:30-15:50 JST)
Pakistan	11:30-11:50 on Nov.30 (15:30-15:50 JST)
Lesotho	9:00-9:20 on Nov.29 (16:00-16:20 JST)
Zambia	9:00-9:20 on Nov.30 (16:00-16:20 JST)
Malawi	9:30-9:50 on Nov.29 (16:30-16:50 JST)
Democratic Republic of the Congo	9:00-9:20 on Nov.29 (17:00-17:20 JST)
Morrocó	9:00-9:20 on Nov.30 (17:00-17:20 JST)
Togo	8:30-8:50 on Nov.29 (17:30-17:50 JST)
Sierra Leone	8:30-8:50 on Nov.30 (17:30-17:50 JST)

※The schedule is subject to change.

11. Circumstance for Internet Connection

The program is conducted through a platform “Zoom Webinar and/or Meeting”. It’s necessary to ensure a stable and secure internet connection to access the platform. Internet speeds of downloading and uploading are recommended approximately 3 to 5 Mbps. (0.5 to 1.5 Mbps at least).

Please refer to this URL for how to measure internet speed.

<https://www.speedtest.net/>

Mobile phones are not recommended.

【Note】If you are not able to arrange internet connection or necessary devices, please consult with JICA office in your country.

12. Attendance requirement

Participation in both On Demand and Online program is an essential requirement for the completion of the course. Partial attendance is not allowed.

III. Conditions and Procedures for Application

1. Expectations from the Participating Organizations:

- (1) This course is designed primarily for organizations that intend to address specific issues or problems identified in their operation. Applying organizations are expected to use the program for those specific purposes.
- (2) This course is enriched with contents and facilitation schemes specially developed in collaboration with relevant prominent organizations in Japan. These special features enable the course to meet specific requirements of applying organizations and effectively facilitate them toward solutions for the issues and problems.
- (3) In this connection, applying organizations are expected to nominate the most qualified candidates to address the said issues or problems, carefully referring to the qualifications described in section III-2 below.
- (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 starting of this course.
- (5) Participating organizations are also expected to make the best use of the results achieved by their participants.

2. Nominee Qualifications

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

(1) Essential Qualifications

*Nominees are required to have comprehensive knowledge regarding Hydropower development. So, please be notified that the contents of this course focus on Planning rather than other subjects such as Operation and maintenance of hydro power plant.

- 1) **Current Duties:** be responsible for hydropower development and those currently (or expected to be in the near future) posted to the managerial position in the government agencies or electric power utilities which are in charge of the development of hydropower generation.
- 2) **Experience in the relevant field:** have a practical experience in the field of hydropower development.
- 3) **Educational Background:** be a graduate of university
Preferable to mechanical, electrical and civil engineering majors.
Lectures are covered various topics such as basic theories related to hydroelectric power generation based on mechanical, electrical and civil engineering and general matters in respect to national policies and plans.
Participants are expected to have a will to learn comprehensive knowledge of

both their specialized fields and outside of their fields.

- 4) **Language:** have a sufficient command of spoken and written English which is equal to TOEFL IBT 79-80 (CBT 213, PBT 550) or more (This course includes active participation in discussions and intensive policy proposal writing, thus requires high competence of English ability. Please attach an official certificate for English ability such as TOEFL, TOEIC etc.)
- 5) **Health:** must be in good health, both physically and mentally, to participate in the Program.
- 6) Meet the condition of II 11. Circumstance for Internet Connection” on page 9.
- 7) **Attendance:** Be required to attend all the program. In some countries, lectures will be held early in the morning or late at night, so it is a condition of participation that the participants are able to attend these live meetings.

(2) Recommendable Qualifications

- 1) Expectations for the Participants: Have ability of human communication skills for effective learning in amicable collaboration.
- 2) Age: be between thirty (30) years and fifty (50) years
- 3) Gender Consideration: JICA is promoting Gender equality. Women are encouraged to apply for the program.

3. Required Documents for Application

(1) Application Form:

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

(2) ANNEX 2 Questionnaire

(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) Photocopy of Passport or ID:

The following information should be included:

Name, Date of Birth, Nationality, and Expiry Date

4. Procedures for Application and Selection :

(1) Submission of the Application Documents:

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

(After receiving applications, the JICA office (or the Embassy of Japan) will send them to **the JICA Center in JAPAN** by **September 21, 2021**)

(2) Selection:

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

(3) Notice of Acceptance

Notification of results will be made by the JICA office (or the Embassy of Japan) **not later than October 5, 2021.**

5. Documents to be submitted by accepted candidates:

Before coming to Japan, only accepted participants are requested to send 2 documents which mentioned below.

Those documents should be sent to JICA by **November 1, 2020**, by e-mail to tictip@jica.go.jp.

(The maximum data size of each e-mail message is 3 MB.)

(1) Presentation data based on the Job Report (detailed in “ANNEX 1”)

Only accepted candidates are requested to prepare a Job Report using power point slides, on the subjects given in ANNEX 1.

(2) Either Annual Report or Statistics, or both

If participants' organization or electric power sector makes annual reports or statistics or both, the latest ones should be submitted.

6. Conditions for Attendance:

(1) To strictly adhere to the program schedule.

(2) Not to change the program topics.

(3) To attend all the programs: **partial attendance is not allowed.**

(4) **To respect copyright and portrait rights.** To refrain from recording and sharing the video material, audio material, text, images, graphics and other content available during the program except for cases with specific permission.

(5) In principle, a completion certificate will be given to participants who have achieved certain results by participating in all on-demand and online programs.

IV. Administrative Arrangements

1. Organizer:

(1) **Name:** JICA TOKYO

(2) **URL:** <https://www.jica.go.jp/tokyo/english/office/index.html>

(3) **Contact:** Industrial Development and Public Policy Division, JICA Tokyo
(Officers in Charge: Ms. Maeda) email: tictip@jica.go.jp

* Please add the course number “201902104-J002” or “202003157J001” to a message subject in your mail.

2. Implementing Partner:

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

(2) **URL:** <https://www.jepic.or.jp/en/>

3. Expenses:

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

(1) Expenses for program implementation, including materials.

(2) A round-travel expense to the place where participants take this program in case participants will not take this program at home or office. For the details, kindly ask at JICA office.

4. Reference information

This program is not covered Japan -visit program. YouTube of “Knowledge Co-Creation Program and Life in Japan” and “Introduction of JICA Center” are viewable from the link below.

Part I: Knowledge Co-Creation Program and Life in Japan	
English ver.	https://www.youtube.com/watch?v=SLurfKugrEw
French ver.	https://www.youtube.com/watch?v=v2yU9ISYcTY
Spanish ver.	https://www.youtube.com/watch?v=m7l-WIQSDjI
Russian ver.	https://www.youtube.com/watch?v=P7_ujz37AQc
Arabic ver.	https://www.youtube.com/watch?v=1iBQqdpXQb4
Part II: Introduction of JICA Centers in Japan	
JICA Tokyo	https://www.jica.go.jp/tokyo/english/office/index.html

5. Others

In the context of the COVID-19 pandemic, please note that there is still a possibility the course period will be changed, shortened, or the course itself will be cancelled.

< Reference: Tentative Schedule (2021)>

DATE	DAY	Japan Time	Program	Institute	Method
Nov. 4	Thu	17:00 ~ 17:45	Testing your connection	JICA, JEPIC	Zoom (Live stream)
		17:45 ~ 19:00	Program Orientation by JICA & JEPIC		
Nov. 5	Fri	Period of watching lecture ① Outline of JEPIC and Electrical Power Industry in Japan		Participants	LMS (on demand)
Nov. 6	Sat				
Nov. 7	Sun				
Nov. 8	Mon	17:00 ~ 18:00	Development of Hydropower Station under Japanese ODA	JICA	Zoom (Live stream)
		18:00 ~ 19:00	Q&A session ・ Outline of JEPIC and Electrical Power Industry in Japan	JEPIC	
Nov. 9	Tue	17:00 ~ 19:30	JOB Report Presentation	JICA, JEPIC, J-POWER	Zoom (Live stream)
Nov. 10	Wed	17:00 ~ 19:30	JOB Report Presentation		
Nov. 11	Thu	Period of watching lectures ② Outline of Hydropower Development ③ Operation & Maintenance of Hydropower plant (Electricity) ④ Operation & Maintenance of Hydropower plant (Civil) ⑤ Design of Hydropower Plant (Electricity)		Participants	LMS (on demand)
Nov. 12	Fri				
Nov. 13	Sat				
Nov. 14	Sun				
Nov. 15	Mon				
Nov. 16	Tue	17:00 ~ 19:00	Q&A session ② Outline of Hydropower Development ③ Operation & Maintenance of Hydropower plant (Electricity) ④ Operation & Maintenance of Hydropower plant (Civil) ⑤ Design of Hydropower Plant (Electricity)	J-power	Zoom (Live stream)
Nov. 17	Wed	Period of watching lectures ⑥ Design of Hydropower Plant (Civil) ⑦ Geological Investigation & Evaluation for Hydropower plant ⑧ Environmental Impact Assessment on Hydropower Plant ⑨ Project Management		Participants	LMS (on demand)
Nov. 18	Thu				
Nov. 19	Fri				
Nov. 20	Sat				
Nov. 21	Sun				
Nov. 22	Mon	17:00 ~ 19:00	Q&A session ⑥ Design of Hydropower Plant (Civil) ⑦ Geological Investigation & Evaluation for Hydropower plant ⑧ Environmental Impact Assessment on Hydropower Plant ⑨ Project Management	J-power	Zoom (Live stream)
Nov. 23	Tue	Period of watching lecture ⑩ Experience of J-power's experts Period of drawing up Action plan		Participants	LMS (on demand) making PPT
Nov. 24	Wed				
Nov. 25	Thu	17:00 ~ 18:00	Discussion about hydropower plants	JEPIC, J-POWER	Zoom (Live stream)
		18:00 ~ 19:00	Q&A session ⑩ Experience of J-power's experts	J-power	
Nov. 26	Fri	Period of drawing up Action plan		Participants	making PPT
Nov. 27	Sat				
Nov. 28	Sun				
Nov. 29	Mon	14:30 ~ 18:00	Action Plan Report Making/Discussion	JEPIC, J-POWER	Zoom (Live stream)
Nov. 30	Tue	14:30 ~ 18:00	Action Plan Report Making/Discussion		
Dec. 1	Wed	Period of drawing up Action plan Submit Action plan to JICA		Participants	making PPT
Dec. 2	Thu	17:00 ~ 20:00	Action Plan Presentation	JICA, JEPIC, J-POWER	Zoom (Live stream)
Dec. 3	Fri	17:00 ~ 19:00	Action Plan Presentation		
		19:00 ~ 20:00	Evaluation Meeting & Closing Ceremony		

※ The program is subject to change.

ANNEX 1 :

For only accepted participants

Job Report

The participant is obligated to prepare the Job Report including contents as shown in Annex 1 in Preliminary Phase, and to make a presentation about it within 10 minutes using Power Points at the beginning of Core Phase.

<Example of Job Report>

FY 2021 JICA

Promotion of Hydropower Development Course

EXAMPLE

Job Report

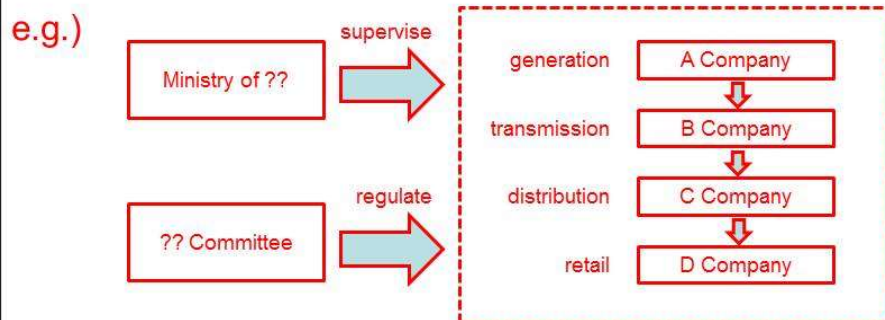
DATE: ○○. ○○ . ○○
NAME: ○○○○
ORGANIZATION:○○○○

Contents

1. Outline of Electric Power Industry in Your Country
2. Your Organization and Its Responsibility
3. Your Job/Responsibility in Your Organization
4. Facing Issues related to Hydropower Development in Your Country

1. Outline of Electric Power Industry in Your Country (1) Structure of Electric Power Sector

Explain the outline of electric power sector in your country.
(structure, private or public, reformation plan etc.)



1. Outline of Electric Power Industry in Your Country
(2) Electric Power System (Transmission System)

Show the electric power system in your country.
(Map of main transmission lines and main power stations)

1. Outline of Electric Power Industry in Your Country
(3) Electricity Demand and Generating Facilities

Show the latest figures on the amount of electricity demand and generating facilities in your country.

e.g.)

Generating Facilities (2014)	Hydropower	300MW
	Coal Thermal	100MW
	Gas Thermal	100MW
	Diesel	100MW
	Total	600MW
Electricity Demand (2014)	Peak Demand	550MW
	Annual Consumption	3,000GWh

1. Outline of Electric Power Industry in Your Country

(4) Power Plants

Show the list of power plants and explain its characteristics.
e.g.)

Name	Installed Capacity	Units	Generation Type	Turbine Type	Dam Type, Fuel	Condition
A Hydropower Plant	100MW	50MW*2units	Reservoir	Francis	Concrete Facing Rock-fill	In operation
B Thermal Power Plant	300MW	300MW*1unit	CCGT	-	LNG	In operation
C Hydropower Plant	10MW	5MW*2units	Run of River	Kaplan	Concrete Gravity	Under construction
D Thermal Power Plant	200MW	100MW*2units	Diesel	-	Heavy oil	Planning
E Hydropower Plant	1MW	500kW*2units	Run of River	Francis	Earth-fill	Planning

1. Outline of Electric Power Industry in Your Country

(5) Power Demand and Supply

Show the peak demand, growth rate, installed capacity, generation and typical Daily Load Curve.

	Peak Demand(MW)	Growth Rate of Peak Demand(%)	Installed Capacity(MW)	Generation(GWh)	Growth Rate of Generation (%)
2009					
2010					
2011					
2012					
2013					
2014					
2015					
2016					
2017					
2018					

1. Outline of Electric Power Industry in Your Country

(6) Power Development Plan

Show the development plan for the power plants and explain its characteristics.

Name	Location	Commencement Operation Date	Power Output(MW)	Annual Power Energy(GWh)	Development Stage	Developer/Engi neer

2. Your Organization and Its Responsibility

Explain outline (organization chart, responsibility, etc) of your organization.

3. Your Job/Responsibility in Your Organization

Explain your job/responsibility in your organization.

4. Facing Issues related to Hydropower Development in Your Country

No.	Facing Issues related to Hydropower Development	Background/Causes of the Issue
1	Describe facing issues regarding hydropower development in your country and/or your organization, and their backgrounds/causes in detail.	
2		
3		
4		
5		
	To add columns when necessary.	

End

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, programs, JOCV programs, etc.

Within this wide range of programs, 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 and 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.



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