





JICA

**TICA** 

**ENTEC** 

# **General Information**

for

# Energy Resilience Assessment: Towards Climate Adaptable Energy Systems

February 19 - 23, 2024

Conducted by

# The Government of Japan

Japan International Cooperation Agency (JICA)

#### The Government of Thailand

Thailand International Cooperation Agency (TICA)
National Science and Technology Development Agency (NSTDA)



#### Thailand International Cooperation Agency (TICA)

#### **TICA's Vision**

TICA aspires to be a central agency on technical and development cooperation under the Royal Thai Government to serve as a bridge for global sustainable development.

#### **TICA's Mission**

TICA is the main agency to execute international development cooperation with foreign governments, international organizations and intergovernmental organizations.

TICA is the focal agency in formulating strategic guidelines and policies on international development cooperation to be comprehensively in line with the Royal Thai Government's foreign policies.

#### **Objectives**

- To develop international cooperation plan, study and analysis on cooperation policy including implementation, follow-up and evaluation of technical cooperation projects.
- To administer development cooperation programmes provided to developing countries according to foreign policies of the Royal Thai government.
- To cooperate with various development partners including foreign governments and international organizations to develop technical cooperation projects for development under bilateral and multilateral frameworks.
- To administer fellowships and scholarships offered to developing countries for human resources development in public and private sectors as well as civil society.
- To coordinate international development cooperation.
- To disseminate information regarding development cooperation to government agencies concerned and international organizations.

#### Thailand International Cooperation Agency (TICA)

Ministry of Foreign Affairs

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Website : https://tica-thaigov.mfa.go.th



#### Japan International Cooperation Agency (JICA)

#### **ODA** and **JICA**

Since 1954, Japan has been providing financial and technical assistance to developing countries through ODA (Official Development Assistance), aiming to contribute to the peace and development of the international community. JICA is in charge of administering all ODA such as technical cooperation, ODA loans and grant aid in an integrated manner. JICA assists and supports developing countries as the executing agency of Japanese ODA, and works in over 150 countries and regions and has some 100 overseas offices.

#### **JICA's Vision**

#### Leading the world with trust

JICA, with its partners, will take the lead in forging bonds of trust across the world, aspiring for a free, peaceful and prosperous world where people can hope for a better future and explore their diverse potentials.

#### **JICA's Mission**

JICA, in accordance with the Development Cooperation Charter, will work on human security and quality growth.

#### Actions

- 1. Commitment: Commit ourselves with pride and passion to achieving our mission and vision.
- 2. Gemba: Dive into the field ("gemba") and work together with the people.
- 3. Strategy: Think and act strategically with broad and long-term perspectives
- 4. Co-creation: Bring together diverse wisdom and resources.
- 5. Innovation: Innovate to bring about unprecedented impacts.

#### Japan International Cooperation Agency (JICA), Thailand Office

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Klongtoey, Bangkok 10110

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#### National Energy Technology Center (ENTEC)

#### **ENTEC**

ENTEC is the fifth National Center under the National Science and Technology Development Agency (NSTDA), Ministry of Higher Education, Science, Research and Innovation (MHESI). ENTEC was established on June 9, 2020 by the Thai Cabinet as a focal point for local and international research and development cooperation. The mission of ENTEC is to carry out activities that support governmental policies including Sustainable Development Goal (SDG), National Energy Plan (NEP) and the national agenda, Bio-Circular-Green Economy Model. The recent focuses of ENTEC's research and development include five areas of energy technology research and development: renewable energy, energy storage system, conventional energy, system integration and energy management, and energy efficiency.

#### **ENTEC's Vision**

A leading organization & a focal point for Thailand's energy technology development

#### **ENTEC's Mission**

- 1. To conduct research, create and comprehend knowledge in supporting Thailand Integrated Energy Blueprint (TIEB)
- 2. To generate and transfer high-quality energy technology knowhow to relevant stakeholders towards palpable impacts
- 3. To work hand-in-hand with both public and private partners on research and development of energy technologies
- 4. To integrate major resources from various channels for prompt actions

#### **National Energy Technology Center (ENTEC)**

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#### **The Third Country Training Programme (TCTP)**

on

# Energy Resilience Assessment: Towards Climate Adaptable Energy Systems February 19 - 23,2024

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The Third Country Training Programme on "Energy Resilience Assessment: Towards Climate Adaptable Energy Systems" is conducted by the Government of Thailand and the Government of Japan as part of their Technical Cooperation Scheme.

The course arrangements are referred to Record of Discussion signed on 9th November 2023 and jointly supported by Thailand International Cooperation Agency (TICA), Ministry of Foreign Affairs, and Japan International Cooperation Agency (JICA) in collaboration with National Energy Technology Center (ENTEC) under National Science and Technology Development Agency (NSTDA), Ministry of Higher Education, Science, Research and Innovation.

### Background

Climate change has become a worldwide threat. The realization of its impacts led the global leaders towards Paris Agreement in the 21st United Nations Climate Change Conference (COP21) in 2016. Later in COP26, apart from Carbon Neutral target in 2050, the global leaders agreed upon enhancing the world's adaptability against climate change to protect the nature and the communities, in which enhancing infrastructure resilience has been identified as one of the adaptive pathways. Though energy infrastructures, especially renewables, significantly contribute to greenhouse gas (GHG) emission reduction, they themselves are vulnerable to climate-related events with increasing severity of impacts. This impedes the progress of reducing GHG emissions, especially in low income countries, such as Cambodia, Laos, Myanmar, Vietnam (CLMV). The concept of energy resilience is among promising solutions that is believed to be capable of addressing the issue. APEC community has realized the significance of the energy resilience concept. It started discussing the ways towards energy resilient APEC community since 2015, and recently established APEC Energy Resiliency Principle in 2020 to show the eagerness.

Through APEC network, ENTEC initiated to pioneer energy resilience in 2019. In the 79th meeting of the ASEAN Committee on Science, Technology and Innovation (COSTI), ENTEC, with the great support from the Ministry of Higher Education, Science, Research and Innovation (MHESI), successfully made energy resilience a 2021 COSTI annual priority that help achieve Sustainable Development Goals (SDGs). To accelerate the movement against climate change, ASEAN Member States, especially CLMV countries, should receive an equal opportunity to contribute to the climate change goals. It would be mutually beneficial for Japan, one of the leading countries in the APEC Energy Resiliency Task Force (ERTF), and Thailand, the Energy Resilience Assessment initiator in ASEAN, to organize a joint training to disseminate knowledge and practices on the ways to enhance energy resilience to ASEAN Member States, especially CLMV countries. This cooperative effort will boost the hidden ability of the CLMV and other developing countries to contribute to the achievement of climate change goals.

#### Title

The Third Country Training Programme on Energy Resilience Assessment: Towards Climate Adaptable Energy Systems

#### **Overall Goal**

The project aims to enable the realization of energy resilience concept as means to enhance energy infrastructure adaptability against climate change, and promote actual implementation of energy resilience assessment in ASEAN Member States, with a focus on CLMV, in order to leverage the efforts towards the Sustainable Development Goals.

#### **Anticipated Benefits:**

- 1. To disseminate knowledge on energy resilience concept and provide hands-on training on energy resilience assessment to ASEAN countries and Timor Leste, with a focus on CLMV countries.
- 2. To facilitate pilot energy resilience assessments in ASEAN countries, in particular CLMV countries.
- 3. To facilitate the development of energy resilience assessment hubs of knowledge in interested ASEAN countries.

#### Duration

February 19 – 23, 2024 (1 week)

#### **Invited Countries**

Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand, Vietnam, and Timor Leste. Singapore and Brunei Darussalam will be self-funded for international travel expenses and related costs.

#### **Number of participants**

The total number of participants from the invited countries shall not exceed twenty-seven (27) in total, in particular, 25 participants from Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, Vietnam (maximum 3 participants each from the above list) and 2 participants from Timor Leste.

#### Language

The courses will be conducted in English.

#### Institution

The course will be conducted by National Energy Technology Center (ENTEC), National Science and Technology Development Agency (NSTDA), with the support of Asian Development College for Community Economy and Technology (adiCET), Chiang Mai Rajabhat University (CMRU), Ministry of Higher Education, Science, Research and Innovation.

#### Venue

The course will be conducted at

1. Chiang Mai Rajabhat University (Main Campus)

202 Changpuak Rd, Tambon Chang Phueak, Amphoe Mueang Chiang Mai, Chang Wat Chiang Mai 50300 Thailand

Tel: 0 5388 5555

Fax:

URL: www.cmru.ac.th

2. Asian Development College for Community Economy and Technology (adiCET) Address: 180 Moo 7 Chotana Road, Tambon Khilek, Mae Rim, Chiang Mai 50180

Thailand

Tel: 06 2310 4908

Fax:

URL: www.adicet.cmru.ac.th

#### **Qualifications**

The participants are requested to have the following qualifications.

- 1. Being nominated by their governments in accordance with the procedure stipulated in Application Procedure (1);
- 2. Having completed at least bachelor's degree or equivalent academic background in science, engineering or related field;
- 3. Being officials / officers with at least two (2) years working experience in energy field (researcher, faculty member, or policy related officer);
  - 4. Being under 45 years of age;
- 5. Being proficient in spoken and written English; and able to contribute effectively to classroom discussion
- 6. Being in good health, both physically and mentally; each participant should have a health certificate provided by an authorized physician. The medical report form is also attached together with the Nomination form. Pregnancy is regarded as a disqualifying condition for participation in the Course; and
  - 7. Not being serving in any form of the military services.

#### **Application Procedure**

- 1. The Applicant or the Government applying for the Course on behalf of applicant(s) shall forward the application form of each applicant not later than January 8, 2024, and the details are indicated in the following:
  - Three (3) hard copies to:

Royal Thai Embassy in their country

- One soft/digital copy to:

Director, Human Resources Development Cooperation Division,

Thailand International Cooperation Agency,

Ministry of Foreign Affairs of Thailand

The Government Complex, Building B (South Zone), 8th Floor,

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Tel +66-2203-5000 ext. 43302, Fax: +66-2143-8451

E-mail: tctp.tica@gmail.com, siwalee.w@mfa.go.th

- One soft/digital copy to:

Dr. Kampanart Silva

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E-mail: kampanart.sil @entec.or.th

#### Certificate

Participants who have successfully completed the course will be awarded a certificate by JICA, TICA, and ENTEC.

#### **Allowance and Expenses**

The following allowance and expenses will be borned by the the Government of Thailand and the Government of Japan

- 1. Economy class round trip air ticket for arrival and departure the International Airport in Bangkok designated by TICA will be issued to the approved candidate.
- The approved candidates are requested to send a copy of their passport for the arrangement of the electronic air ticket.
  - **Electronic air tickets** will be sent to the applicants via email from TICA.
- 2. Living allowance at the rate of Baht 600 per day (equivalent to approximately US\$17) will be paid to the participant during stay in Thailand. This living allowance is for food, local transportation and other personal daily expenses. However, each participant is suggested to have his/her own pocket money sufficient for any emergency case available prior to the allowance payment.

#### **Accommodation and Meals**

The accommodation of the participants is allocated at the training venue. A shuttle van will be available for a daily round trip pickup service between participants' accommodation and adiCET and other locations if necessary. Participants can have their meals at restaurants around reserved accommodations by their own per-diem.

#### **Contact persons**

For more information, please contact

- Dr. Kampanart Silva

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**THAILAND** 

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E-mail: tctp.tica@gmail.com, siwalee.w@mfa.go.th

#### Other necessary information:

1. Participants are required to arrive in Thailand on the date as designated by the TICA after its confirmation of acceptance. However, it will be finally confirmed by the air tickets sent to the participants. Participants are also requested to confirm the flight details and date of arrival in Chiang Mai to the TICA at least three days before the course commencement.

- 2. Participants are responsible for other expenses occurred during travel between the participants' home countries and Thailand, such as local transportation, passport fees, or airport tax.
- 3. Prior to arrival in Thailand, all participants should obtain the Non-Immigrant VISA (F) from the Royal Thai Embassy or Consular Representative in their countries or the countries nearby. The visa fee, with receipt of Thai embassy can be reimbursed not exceeding 3,000 Baht.
- 4. Participants should make their own arrangements for any private financial matters. This is not provided by the TICA and JICA.
- 5. Transportation from the airport to the reserved hotel will be provided. Upon arrival at Chiang Mai International Airport, after passing custom clearance and the inner exit gate, host country's staff will be standing by to receive participants. Kindly note the logistic fee will be charged on ENTEC directly.
  - 6. Participants are required to attend according to the course schedule.
  - 7. Participants are requested not to bring any of their families to the training course.

#### Life and Health Insurance

In accordance with relevant regulation, free minor medical treatment will be provided for participants who become ill during his / her stay in Thailand.

#### **Course Outline**

- 1. General Course:
  - 1.1 Country report presentations on national alternative and renewable energy policy and national climate change policy
  - 1.2 Climate change and energy infrastructure
    - 1.2.1 Climate change adaptation in energy sector
    - 1.2.2 Climate resilience and disaster resilience
  - 1.3 Related national and regional policy landscape
    - 1.3.1 Japan Green Transformation
    - 1.3.2 ASEAN Energy Outlook
    - 1.3.3 ASEAN State of Climate Change Report
    - 1.3.4 ASEAN Strategy for Carbon Neutrality

#### 2. Specific Course:

- 2.1 Energy resilience concept
  - 2.1.1 Energy resilience concept and its interpretation
  - 2.1.2 APEC Energy Resiliency Principle
- 2.2 Energy resilience assessment
  - 2.2.1 ASEAN Energy Resilience Assessment Guideline
  - 2.2.2 Case studies of energy resilience assessment
  - 2.2.3 Energy resilience assessment hands-on training
  - 2.2.4 Energy resilience assessment tabletop exercise
- 2.3 Discussion and presentations

#### Annex-1

## Country Report for The Third Country Training Programme on Energy Resilience Assessment: Towards Climate Adaptable Energy Systems

The course provides an opportunity for participants to co-develop energy resilience solutions towards climate adaptable energy systems. Each participating country is, therefore, requested to prepare and present a country report in the form of a presentation on national alternative and renewable energy policy and national climate change policy. The presentation should be prepared using Microsoft PowerPoint, which may take about 10 minutes for each country. Exercises and group assignments will be given throughout the course, aiming at increasing the training and practical orientation, as well as bringing the different nationalities close together. The course covers **one week** with lectures, hands-on training, group working, and discussion. A site visit to 702 kW solar power plant on Chiang Mai Rajabhat University (CMRU) is planned to support the hands-on training.

#### **Content of Country Report**

- 1. Name of the participants
- 2. Introduction of the organizations the participants belong to.
- 3. Information
  - 4.1 Brief general information
    - a. Introduction to the participants' country (Location, Population, Map, Natural Resources, etc.)
    - b. Social and economic background
  - 4.2 Specific Information
    - a. National alternative and renewable energy policy
    - b. National climate change policy
    - c. Describe situation regarding alternative and renewable energy in participants' country
- d. Explain your idea on increased vulnerability of alternative and renewable energy systems due to climate change, and potential resilience enhancement measures

# **Country Lists and Focal Point Information**

Country	Focal Point		
Brunei Darussalam	Dr. Rosnah binti Abdullah		
	Chair, ASEAN Sub-committee on Sustainable Energy Research		
	(SCSER)		
	Assistant Professor		
	Faculty of Science		
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	Mr. Mohammad Izwan bin Hj Tarip		
	Member, ASEAN Sub-committee on Sustainable Energy Research		
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	Head of Energy Transition Division		
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	Mr. Chan Visal		
	Member, ASEAN Sub-committee on Sustainable Energy Research		
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	Deputy Director		
	Department of Science, Technology & Innovation Collaboration		
	General Department of Science, Technology & Innovation		

Country	Focal Point			
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Country	Focal Point			
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	Sci. Dpl. Glenn S. Banaguas			

Country	Focal Point			
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Country	Focal Point					
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# **Tentative Schedule**

Date/Month/Year	Morning (9.00 – 12.00)	Afternoon (13.00 – 16.30)	Evening
February 18, 2024	Participants' arrival		
February 19, 2024	<ul> <li>Welcome remarks and opening ceremony</li> <li>Self-introduction</li> <li>Introduction of energy resilience assessment training</li> <li>Country report         <ul> <li>Brunei Darussalam</li> <li>Cambodia</li> <li>Indonesia</li> <li>Lao PDR</li> <li>Malaysia</li> <li>Myanmar</li> <li>Philippines</li> <li>Singapore</li> <li>Timor Leste</li> <li>Thailand</li> <li>Vietnam</li> </ul> </li> </ul>	<ul> <li>Energy resilience concept and its interpretation</li> <li>APEC Energy Resiliency Principle</li> <li>Climate change adaptation in energy sector</li> <li>Climate resilience and disaster resilience</li> </ul>	Welcome Dinner
February 20, 2024  February 21, 2024	<ul> <li>Japan Green Transformation</li> <li>ASEAN Energy Outlook</li> <li>ASEAN State of Climate Change Report</li> <li>ASEAN Strategy for Carbon Neutrality</li> <li>ASEAN Energy Resilience Assessment Guideline</li> <li>Site visit: CMRU's 702 kW</li> </ul>	<ul> <li>Energy resilience         assessments in Malaysia</li> <li>Energy resilience         assessments in Japan</li> <li>Energy resilience         assessments in Thailand</li> <li>Recap of energy resilience         assessment case studies</li> <li>Energy resilience</li> </ul>	Free
,	solar power plant	assessment (hands-on training with the case study of CMRU's 702 kW solar power plant)	
February 22, 2024	<ul> <li>Introduction to Pha Dan community solar facility</li> <li>Energy resilience assessment tabletop exercise with Pha Dan community solar facility</li> </ul>	<ul> <li>Energy resilience         assessment tabletop         exercise with Pha Dan         community solar facility</li> <li>Presentation of the         preliminary results from         tabletop exercise</li> </ul>	Free

Date/Month/Year	Morning (9.00 – 12.00)	Afternoon (13.00 – 16.30)	Evening
February 23, 2024	<ul> <li>Consideration of potential energy resilience assessment of power plants in trainees' country</li> <li>Post-workshop action plan         <ul> <li>Brunei Darussalam</li> <li>Cambodia</li> <li>Indonesia</li> <li>Lao PDR</li> <li>Malaysia</li> <li>Myanmar</li> <li>Philippines</li> <li>Singapore</li> <li>Timor Leste</li> <li>Thailand</li> <li>Vietnam</li> </ul> </li> </ul>	<ul> <li>Wrap-up</li> <li>Certificate presentation ceremony</li> <li>Cultural visit</li> </ul>	Free
February 24, 2024	Participants' Departure		