



**JICA**



**TICA**



**ENTEC**

## **General Information**

**for**

# **Energy Resilience Assessment: Towards Climate Adaptable Energy Systems**

**November 18 – 27, 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  
8<sup>th</sup> Floor, Government Complex Building B (South Zone)  
Chaengwattana Road,  
Laksi District, Bangkok 10210  
Thailand

Telephone : +66-2203-5000 ext. 43302  
Facsimile : +66-2143-8357  
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**

31<sup>st</sup> Floor, Exchange Tower,  
388 Sukhumvit Road,  
Klongtoey, Bangkok 10110  
Thailand

Telephone : +66 2261 5250

Facsimile : +66 2261 5263

Website : <http://www.jica.go.jp/thailand/english/index.html>



## *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)**

111 Thailand Science Park,  
Phahonyothin Road, Khlong Nueng, Khlong Luang,  
Pathum Thani, 12120  
Thailand

Telephone : +66-2564-6500  
Facsimile : +66-2564-6501-5  
Website : [www.entec.or.th](http://www.entec.or.th)

**The Third Country Training Programme (TCTP)**  
**on**  
**Energy Resilience Assessment: Towards Climate Adaptable Energy Systems**  
**November 18 – 27, 2024**

.....

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 are 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). Later in 2023, with the continuous support of TICA, Ministry of Foreign Affairs, and JICA, the first year of the Third Country Training Programme (TCTP) on Energy Resilience Assessment: Towards Climate Adaptable Energy Systems was co-conducted to enable the realization of energy resilience concept and knowledge on conducting energy resilience assessment for solar power plant was successfully disseminated, creating a strong foundation for ASEAN Member State to combat against climate change.

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, to promote actual implementation of energy resilience assessment in ASEAN Member States and Timor Leste, and to disseminate best practices regarding climate finance as a tool to support the improvement of energy infrastructure adaptability, with a focus on CLMV, in order to leverage the efforts towards the Sustainable Development Goals.

The training is designed to provide two training modules which consist of two units of content. The first training module is central to the energy resilience concept and energy resilience assessment. Knowledge and hands-on training will be provided in this module with an objective to disseminate energy resilience assessment to ASEAN countries and Timor Leste. The second training module involves climate finance and finance mobilization to improvement of energy infrastructure against climate change. Best practices on adopting climate finance as a tool to facilitate investment decision regarding climate adaptation will be disseminated.

### **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 disseminate best practices on performing climate finance as a tool to facilitate decision making on energy infrastructure adaptation investment.
3. To facilitate pilot energy resilience assessments in ASEAN countries, in particular CLMV countries.
4. To facilitate the development of energy resilience assessment hubs of knowledge in interested ASEAN countries.

### **Duration**

November 18 – 27, 2024 (8 days excluding weekend). Module I on Energy Resilience Assessment is during November 18 – 22, 2024 (5 days), while Module II on Climate Finance for Energy Resilience Enhancement is during November 25 – 27, 2024 (3 days).

**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, 12 participants from Brunei Darussalam, Indonesia, Malaysia, the Philippines, Singapore, and Vietnam (2 participants each from the above list), 12 participants from Cambodia, Laos, Myanmar, and Thailand (3 participants each from the above list), and 3 participants from Timor Leste.

The Applicant who underwent the first-year training during February 19-23, 2024 can choose to participate in only Module II on Climate Finance for Energy Resilience Enhancement. A copy of the certificate should be submitted along with the application.

**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. National Energy Technology Center (ENTEC), National Science and Technology Development Agency (NSTDA)  
Address: 114 Thailand Science Park, Phahonyothin Road, Khlong Nueng, Khlong Luang, Pathum Thani, 12120, Thailand  
Tel: 02 564 6400  
Fax: 0 2564 6501-5  
URL: <https://www.entec.or.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](http://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.

Women are encouraged to apply for the program. We are committed to promoting gender equality and women's empowerment, and providing equal opportunities for all applicants regardless of their sexual orientation or gender identity.

## **Application Procedure**

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 September 27, 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,  
Chaengwattana Road, Laksi District,  
Bangkok 10210, THAILAND  
Tel +66-2203-5000 ext. 43302, Fax: +66-2143-8451  
E-mail: [tctp.tica@gmail.com](mailto:tctp.tica@gmail.com), [siwalee.w@mfa.go.th](mailto:siwalee.w@mfa.go.th)
- One soft/digital copy to:  
Dr. Kampanart Silva  
National Energy Technology Center (ENTEC), National Science and  
Technology Development Agency (NSTDA)  
111 Thailand Science Park, Phahonyothin Road, Khlong Nueng, Khlong  
Luang, Pathum Thani, 12120, THAILAND  
Tel +66-2564-6500, Fax. +66-2564 6501 ext. 5  
E-mail: [kampanart.sil@entec.or.th](mailto:kampanart.sil@entec.or.th)



## **Certificate**

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

## **Allowance and Expenses**

The following allowance and expenses will be borne by 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 THB600 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 near the training venue. A shuttle van will be available for a daily round trip pickup service between participants' accommodation 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

Address: National Energy Technology Center (ENTEC), National Science and Technology Development Agency (NSTDA)

111 Thailand Science Park, Phahonyothin Road, Khlong Nueng, Khlong Luang, Pathum Thani, 12120, Thailand

Tel +66-2564-6500, Fax. +66-2564 6501 ext. 4742

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

- Director, Human Resources Development Cooperation Division,

Address: Thailand International Cooperation Agency,

Ministry of Foreign Affairs of Thailand

The Government Complex, Building B (South Zone), 8th Floor, Chaengwattana Road, Laksi District, Bangkok 10210,

THAILAND

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

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.

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 original receipt of Thai embassy can be reimbursed not exceeding 3,000 Baht.

4. Participants should make their own arrangements regarding any private financial matters. This is not provided by the TICA and JICA.

5. Upon arrival at Don Mueang Airport or Suvarnabhumi Airport, participants are asked to look for TICA sign at the AOT Limousine customer relation counters and proceed to it. Participants are required to show the Instruction of Fellowship Award at the counter so that arrangements for airport transfer to the reserved hotel will be made. Participants do not have to pay for the AOT limousine service charge since the cost will be paid directly to AOT by TICA. Participants are not recommended to take a public taxi to the hotel by themselves as the taxi fees cannot be refundable from TICA.

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. Module I: Energy Resilience Assessment
  - 1.1 General Course:
    - 1.1.1 Country report presentations on national alternative and renewable energy policy and national climate change policy
    - 1.1.2 APEC Energy Resiliency Principle
    - 1.1.3 Disaster resilience
    - 1.1.4 ASEAN Strategy for Carbon Neutrality
  - 1.2 Specific Course:
    - 1.2.1 Energy resilience concept and its interpretation
    - 1.2.2 ASEAN Energy Resilience Assessment Guideline
    - 1.2.3 APEC Energy Resiliency Principle
    - 1.2.4 Disaster resilience
    - 1.2.5 Case studies of energy resilience assessment
    - 1.2.6 Energy resilience assessment hands-on training
    - 1.2.7 Energy resilience assessment tabletop exercise
  - 1.3 Discussion and presentations
2. Module II: Climate Finance for Energy Resilience Enhancement
  - 2.1 General Course:
    - 2.1.1 Finance mobilization in adaptation sector
    - 2.1.2 Necessity for finance in climate adaptation and recent challenges
    - 2.1.3 Green and sustainability bonds
    - 2.1.4 Climate insurance in adaptation sector and risk premium
    - 2.1.5 Funding opportunities
  - 2.2 Specific Course:
    - 2.2.1 Evaluation of change over time and resilience curve
    - 2.2.2 Financial consideration for energy resilience assessment
    - 2.2.3 Change over time hands-on training
    - 2.2.4 Cost-benefit analysis hands-on training
    - 2.2.5 Resilience measure selection
  - 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. In addition, best practices on conducting financial analysis to assist investment decisions are disseminated. Each participating country is, therefore, requested to prepare and present a country report in the form of a presentation on current 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 **eight days** with lectures, hands-on training, group working, and discussion (five days for Module I: Energy Resilience Assessment, and three days for Module II: Climate Finance for Energy Resilience Enhancement). A site visit to 702 kW solar power plant on Chiang Mai Rajabhat University (CMRU) is planned in order to facilitate the hands-on training in Module I.

#### **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	<p>Dr. Rosnah binti Abdullah            Chair, ASEAN Sub-committee on Sustainable Energy Research (SCSER)            Assistant Professor            Faculty of Science            University of Brunei Darussalam            Tungku Link Road, BE1410 Brunei Darussalam            Tel. +673 246 0923 ext. 1323            E-mail: <a href="mailto:rosnah.abdulah@ubd.edu.bn">rosnah.abdulah@ubd.edu.bn</a></p>
	<p>Mr. Mohammad Izwan bin Hj Tarip            Member, ASEAN Sub-committee on Sustainable Energy Research (SCSER)            Head of Energy Transition Division            Department of Energy, Prime Minister's Office            Jalan Perdana Menteri, Bandar Seri Begawan BB3913            Brunei Darussalam            Tel. +673 238 4488            E-mail: <a href="mailto:izwan.tarip@energy.gov.bn">izwan.tarip@energy.gov.bn</a></p>
Cambodia	<p>H.E. Dr. Hul Seingheng            Under Secretary            Ministry of Industry, Science, Technology &amp; Innovation            #45, Preah Norodom Blvd., Sangkat Phsar Thmey III, Khan Daun Penh,            Phnom Penh 12203 Cambodia            Tel. +855 23 211 141            E-mail: <a href="mailto:hul.seingheng@misti.gov.kh">hul.seingheng@misti.gov.kh</a></p>
	<p>H.E. Dr. Kuok Fidero            Under Secretary            Ministry of Industry, Science, Technology &amp; Innovation            #45, Preah Norodom Blvd., Sangkat Phsar Thmey III, Khan Daun Penh,            Phnom Penh 12203 Cambodia            Tel. +855 23 211 141            E-mail: <a href="mailto:kuok.fidero@misti.gov.kh">kuok.fidero@misti.gov.kh</a></p>
	<p>H.E. Dr. Try Sophal            Director General            General Department of Science, Technology &amp; Innovation            Ministry of Industry, Science, Technology &amp; Innovation            #45, Preah Norodom Blvd., Sangkat Phsar Thmey III, Khan Daun Penh,            Phnom Penh 12203 Cambodia            Tel. +855 17 868 080            E-mail: <a href="mailto:try.sophal@misti.gov.kh">try.sophal@misti.gov.kh</a></p>
	<p>Mr. Chan Visal            Member, ASEAN Sub-committee on Sustainable Energy Research (SCSER)            Deputy Director            Department of Science, Technology &amp; Innovation Collaboration            General Department of Science, Technology &amp; Innovation</p>

Country	Focal Point
	Ministry of Industry, Science, Technology & Innovation #45, Preah Norodom Blvd., Sangkat Phsar Thmey III, Khan Daun Penh, Phnom Penh 12203 Cambodia Tel. +855 12 212 230 E-mail: <a href="mailto:chan.visal@misti.gov.kh">chan.visal@misti.gov.kh</a>
Indonesia	<p>Dr. Deni Shidqi Khaerudini            Research Center for Advanced Material            National Research and Innovation Agency (BRIN)            Gedung B.J. Habibie, Jl. M.H. Thamrin No. 8,            Jakarta Pusat 10340 Indonesia            Tel. + 62 857 1146 1440            Email: <a href="mailto:deni.shidqi@gmail.com">deni.shidqi@gmail.com</a></p> <p>Dr. Tata Sutardi            Member, ASEAN Sub-committee on Sustainable Energy Research (SCSER)            Research Center for Energy Conversion and Conservation            National Research and Innovation Agency (BRIN)            Gedung B.J. Habibie, Jl. M.H. Thamrin No. 8,            Jakarta Pusat 10340 Indonesia            Email: <a href="mailto:tata012@brin.go.id">tata012@brin.go.id</a></p> <p>Dr. Eng. Ir. Adhika Widyaparaga            Faculty of Engineering            Gadjah Mada University            Gd. 440-442 Kawasan Puspiptek Serpong, Tangerang Selatan            15314 Banten, Indonesia            Tel. + 62 274 520 669            Email: <a href="mailto:adhika@ugm.ac.id">adhika@ugm.ac.id</a></p> <p>Dr. Eng. Muhammad Makky,            Director of Innovation and Partnerships, Universitas Andalas            Limau Manis, Pauh, Padang City, West Sumatra 25175, Indonesia            Tel. +62 751 71 181            Email: <a href="mailto:muhmakky@ae.unand.ac.id">muhmakky@ae.unand.ac.id</a></p>
Lao PDR	<p>Dr. Sounthisack Phommachanh            Head of Material Division, National University of Laos            Dongdok Village, Xaythany District, Vientiane, Lao PDR            Tel. +856 21 770 381            Email: <a href="mailto:sack_naiy@hotmail.com">sack_naiy@hotmail.com</a></p> <p>Dr. Boualy Vongvisith            Member, ASEAN Sub-committee on Sustainable Energy Research (SCSER)            Acting Head of Bio-energy Division, Renewable Energy and New            Material Institute            Thangon Road, km 14, Ban Danxang, Lao PDR            Tel: +85 620 5455 9169, +85 620 5238 4534            Email: <a href="mailto:boualy2013@gmail.com">boualy2013@gmail.com</a></p> <p>Dr. Duangsavanh Phommavongsa            Member, ASEAN Sub-committee on Sustainable Energy Research (SCSER)</p>

Country	Focal Point
	<p>Member, ASEAN Sub-committee on Sustainable Energy Research (SCSER)  Head of Administration Division, Faculty of Engineering, National University of Laos  Thangon Road, km 14, Ban Danxang, Lao PDR  Tel. +85 620 2288 8691, +85 620) 5528 8890  Email: <a href="mailto:deuansavanh12@gmail.com">deuansavanh12@gmail.com</a></p>
Malaysia	<p>Prof. Ir. Dr. Nofri Yenita Dahlan  Director  Solar Research Institute (SRI),  Room 11/12, Level 9, Block 4,  College of Engineering  Universiti Teknologi MARA (UiTM), Shah Alam  40450 Shah Alam, Selangor, Malaysia  Tel. +60 1 9667 7281  Email: <a href="mailto:nofriyenita012@uitm.edu.my">nofriyenita012@uitm.edu.my</a></p> <p>Assoc. Prof. Dr. Norasikin Ahmad Ludin  Member, ASEAN Sub-committee on Sustainable Energy Research (SCSER)  Deputy Director  Solar Energy Research Institute (SERI)  Level G, Research Complex, The National University of Malaysia,  43600 Bangi, Selangor, Malaysia  Tel. +60 3 8911 8586  Email: <a href="mailto:sheekeen@ukm.edu.my">sheekeen@ukm.edu.my</a></p>
Myanmar	<p>Dr. Zaw Min Naing  Member, ASEAN Sub-committee on Sustainable Energy Research (SCSER)  Deputy Director General  Renewable Technology Research Energy and Electronic Center  Department of Research and Innovation  Ministry of Science and Technology  No. 6 KabaAye Pagoda Road  P.O. Box 11081 Yankin, Yangon, Myanmar  Tel. +95 1 665 292  Email: <a href="mailto:drzaw290615@gmail.com">drzaw290615@gmail.com</a></p>
The Philippines	<p>Dr. Enrico C. Paringit  Member, ASEAN Sub-committee on Sustainable Energy Research (SCSER)  Executive Director  Philippines Council for Industry, Energy and Emerging Technology Research and Development (PCIEERD)  Department of Science and Technology  DOST Compound, General Santos Avenue, Bicutan, Taguig City, The Philippines  Tel. +63 2 8837 0071  Email: <a href="mailto:enrico.paringit@pcieerd.dost.gov.ph">enrico.paringit@pcieerd.dost.gov.ph</a></p>
	<p>Sci. Dpl. Glenn S. Banaguas</p>

Country	Focal Point
	<p>President, Environmental and Climate Change Research Institute De La Salle Araneta University (DLSAU) Salvador Araneta Campus, Victoneta Ave. Malabon City, The Philippines Tel. +63 91 7498 7210 Email: <a href="mailto:glenn.banaguas@gmail.com">glenn.banaguas@gmail.com</a>, <a href="mailto:glenn.banaguas@delasalle.ph">glenn.banaguas@delasalle.ph</a></p> <p>Dr. Neil Stephen Lopez Mechanical Engineering Department, De La Salle University (DLSU) Gokongwei College of Engineering De La Salle University 8th Floor, Bro. Andrew Gonzalez Hall 2401 Taft Avenue, 1004 Manila, Philippines Tel. +63 2 524 4611 ext. 299 Email: <a href="mailto:neil.lopez@dlsu.edu.ph">neil.lopez@dlsu.edu.ph</a></p>
Singapore	<p>Prof. Madhavi Srinivasan Energy Research Institute (ERI) Nanyang Technological University (NTU) 1 Cleantech Loop, Singapore 637141 Tel. +65 6592 2466 Email: <a href="mailto:madhavi@ntu.edu.sg">madhavi@ntu.edu.sg</a>, <a href="mailto:d-erian@ntu.edu.sg">d-erian@ntu.edu.sg</a></p>
Timor Leste	TBC
Thailand	<p>Prof. Vilas Nitivattananon Department of Development and Sustainability School of Environment, Resources and Development Asian Institute of Technology P.O. Box 4, 58 Moo 9, Km. 42, Phahol Yothin Road, Klong Luang, Pathum Thani 12120 Thailand Tel. +66 2 524 5601 Email: <a href="mailto:vilasn@ait.asia">vilasn@ait.asia</a></p> <p>Assoc. Prof. Dr. Wijitbusaba Marome Head of Urban Futures and Policy Research Unit Faculty of Architecture and Planning Thammasat University (Rangsit Campus) Pathum Thani 12121 Thailand Tel. +66 2 986 9434, +66 2 986 9605-6 ext. 4007 Email: <a href="mailto:wijitbusaba@ap.tu.ac.th">wijitbusaba@ap.tu.ac.th</a></p> <p>Dr. Nutchapon Chiarasumran Chemical Engineering, Faculty of Engineering, Kasetsart University 50 Ngamwongwan Road Ladyao, Chatuchak, Bangkok 10900 Thailand Tel. +66 2 797 0999 ext. 1269 Email: <a href="mailto:nutchapon.ch@ku.ac.th">nutchapon.ch@ku.ac.th</a>, <a href="mailto:np_cr@hotmail.com">np_cr@hotmail.com</a></p> <p>Assoc. Prof. Wongkot Wongsapai Energy Technology for Environment Research Center Faculty of Engineering, Chiang Mai University 239 Huay Kaew Road, Su Thep, Muang, Chiang Mai 50200 Thailand Tel. +66 53 944 904 Email: <a href="mailto:wongkot@eng.cmu.ac.th">wongkot@eng.cmu.ac.th</a></p>



<b>Country</b>	<b>Focal Point</b>
Vietnam	Dr. Nguyen Hoang Nam Policy Advisor, National Economics University Vietnam 207 Giải Phóng, Đồng Tâm, Hai Bà Trưng, Hà Nội, Vietnam Tel. +84 9 3229 0108 Email: <a href="mailto:nguyenhoangnam275@gmail.com">nguyenhoangnam275@gmail.com</a>
	Dr. Vo Tan Chau Faculty of Automotive Engineering Technology Industrial University of Ho Chi Minh City Go Vap District, Ho Chi Minh City 727900 Vietnam Tel. +84 9 3863 4705 Email: <a href="mailto:votanchau@iuh.edu.vn">votanchau@iuh.edu.vn</a>
	Dr. Huynh Thanh Cong Ho Chi Minh City University of Technology 268 Lý Thường Kiệt, Phường 14, Quận 10, Thành phố Hồ Chí Minh, Vietnam Email: <a href="mailto:htcong@hcmut.edu.vn">htcong@hcmut.edu.vn</a>
	Mr. Tran Nam Tu Department of Science, Technology and Environment Ministry of Education and Training #35 Dai Co Viet hai Ba Trưng, Ha Noi, Viet Nam Tel. +84 3 869 2393 Email: <a href="mailto:tntu@moet.gov.vn">tntu@moet.gov.vn</a>

## Tentative Schedule

### Module I: Energy Resilience Assessment

<b>Date/Month/Year</b>	<b>Morning (09:00-12:00)</b>	<b>Afternoon (13:00-16:30)</b>	<b>Evening</b>
November 17, 2024	Participants' arrival		
November 18, 2024	<ul style="list-style-type: none"> <li>• Welcome remarks and opening ceremony</li> <li>• Self-introduction</li> <li>• Introduction of energy resilience assessment training</li> <li>• Country report               <ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• Energy resilience concept and its interpretation</li> <li>• APEC Energy Resiliency Principle</li> <li>• Disaster resilience</li> </ul>	Welcome dinner
November 19, 2024	<ul style="list-style-type: none"> <li>• ASEAN Strategy for Carbon Neutrality</li> <li>• ASEAN Energy Resilience Assessment Guideline I</li> <li>• Energy resilience assessment in Malaysia</li> <li>• Energy resilience assessment in Japan</li> </ul>	<ul style="list-style-type: none"> <li>• Hands-on training on energy resilience assessment (threat and impact)</li> </ul>	Free
November 20, 2024	<ul style="list-style-type: none"> <li>• Travel to Chiang Mai (DMK-CNX)</li> <li>• Travel to adiCET</li> <li>• adiCET tour</li> </ul>	<ul style="list-style-type: none"> <li>• Site visit to 702-kW solar power plant</li> <li>• Energy resilience assessment in Thailand</li> <li>• Cultural visit</li> <li>• Travel to Bangkok (CNX-DMK)</li> </ul>	Free
November 21, 2024	<ul style="list-style-type: none"> <li>• Hands-on training on energy resilience assessment (vulnerability)</li> </ul>	<ul style="list-style-type: none"> <li>• Hands-on training on energy resilience assessment (risk and resilience solution)</li> </ul>	Free

November 22, 2024	<ul style="list-style-type: none"> <li>• Tabletop exercise on energy resilience assessment</li> </ul>	<ul style="list-style-type: none"> <li>• Post-workshop action plan <ul style="list-style-type: none"> <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> <li>• Closing remarks</li> </ul>	Free
November 23, 2024	Free day		
November 24, 2024	Free day		

## Module II: Climate Finance for Energy Resilience Enhancement

Date/Month/Year	Morning (09:00-12:00)	Afternoon (13:00-16:30)	Evening
November 25, 2024	<ul style="list-style-type: none"> <li>• Welcome remarks</li> <li>• Self-introduction</li> <li>• Introduction to climate finance for energy resilience enhancement</li> <li>• ASEAN Energy Resilience Assessment Guideline II (evaluation of change over time and resilience curve)</li> <li>• Financial consideration for energy resilience assessment</li> </ul>	<ul style="list-style-type: none"> <li>• Finance mobilization in adaptation sector</li> <li>• Necessity for finance in climate adaptation and recent challenges</li> <li>• Green and sustainability bonds</li> <li>• Climate insurance in adaptation sector and risk premium</li> </ul>	
November 26, 2024	<ul style="list-style-type: none"> <li>• Funding opportunities for energy resilience enhancement</li> <li>• Hands-on training on change over time (evaluation of change over time, and resilient curve)</li> </ul>	<ul style="list-style-type: none"> <li>• Hands-on training on change over time (cost-benefit analysis)</li> <li>• Resilience measure selection and discussion on enabling a bankable energy resilience project</li> </ul>	Free
November 27, 2024	<ul style="list-style-type: none"> <li>• Steps forward and action plan <ul style="list-style-type: none"> <li>○ Brunei Darussalam</li> <li>○ Cambodia</li> <li>○ Indonesia</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Cultural visit (Ayutthaya)</li> </ul>	Free

	<ul style="list-style-type: none"> <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> <li>● Closing ceremony</li> </ul>		
November 28, 2024	Participants' departure		