Energy Modelling Platform for Asia and the Pacific (EMP-APAC) | 2026

Concept Note

Context

Secure, adequate, and reliable access to modern energy forms and services for livelihoods and industrialisation is critical for achieving sustainable and inclusive development transformation in the Asia-Pacific region, aligned with the aspirations of the Asian Development Bank's Vision 2030 and the UN 2030 Agenda for Sustainable Development. This access will also enhance resilience to climate change-related shocks.

Against a background of increased energy demand for structural transformation, a rising population, the need for sustainable livelihoods, and the adverse impacts of climate change on the continent, there is an urgent need to support Asia and the Pacific countries in strengthening their capacities in energy planning. This will optimise investments in energy production and services to take advantage of the continent's abundant renewable energy resources, falling technology prices, and increasing availability of free open-source and robust energy planning models, data, and interfaces for customised applications to the needs of each country.

Furthermore, nearly all Asia-Pacific countries have included renewable power generation in their Nationally Determined Contributions (NDCs) to climate action under the Paris Agreement. The emphasis on renewable energy in these commitments, combined with the region's abundant renewable resources (such as wind and solar), and the urgent need to mobilise investments to address significant energy deficits, necessitates strategic assessment and planning. This is needed to ensure (i) enough generation capacity and expansion of supply to meet demand, (ii) system flexibility to accommodate high shares of renewables, (iii) adequate transmission capacity to dispatch power to demand centres, (iv) grid stability to accommodate short timeframe variations, (v) appropriate and effective off-grid systems, (vi) optimised investments that capitalise on falling costs of low-carbon technologies to minimise the risk of stranded underperforming energy infrastructure assets in the future, and (vii) sustainable and coordinated use of energy, land, and water resources. Climate action has gained even more credence in light of the ongoing energy transition and growing calls for the Asia-Pacific to establish net-zero emission targets. Yet, many countries in the region face a deficit in human

and institutional capacity regarding effectively using models and modelling tools for energy supply, demand, and investment planning and management.

To date, fifteen rounds of the Energy Modelling Platform have taken place across Europe, Africa, South America and the Caribbean, and Asia and the Pacific, witnessing growing participation and resounding calls for more dedicated sessions. The first EMP-APAC took place in 2025, in Bangkok, Thailand, training 45 participants in 5 different energy modelling tools.

EMP-APAC 2026 will take place from **5th to the 23rd of October 2026** at the United Nations Economic and Social Commission for Asia and the Pacific in Bangkok, Thailand. The event is organised jointly by the Climate Compatible Growth Programme, United Nations Economic and Social Commission for Asia and the Pacific, the Asian Development Bank, the World Bank (specifically the Energy Sector Assistance and Management Program), the International Atomic Energy Agency, the World Resources Institute, and the Department of Energy Security and Net Zero, and the OpTIMUS Community.

Objective

Although the EMP-APAC acknowledges that different countries and regions within Asia-Pacific will require context-specific approaches, the overarching objectives of the platform are to:

- Gather the energy planning and modelling community in Asia-Pacific to share experiences, models, and data in climate, land, energy, and water systems.
- Support human and institutional capacity in Asia-Pacific for integrated energy modelling and investment planning.
- Support the development of centres of excellence for energy planning in Asia-Pacific.
- Promote efficient and widespread use of open-source modelling tools to support the implementation of the SDGs, the Paris Agreement, and the Asian Development Banks Vision 2030.

Structure of the EMP-APAC 2026

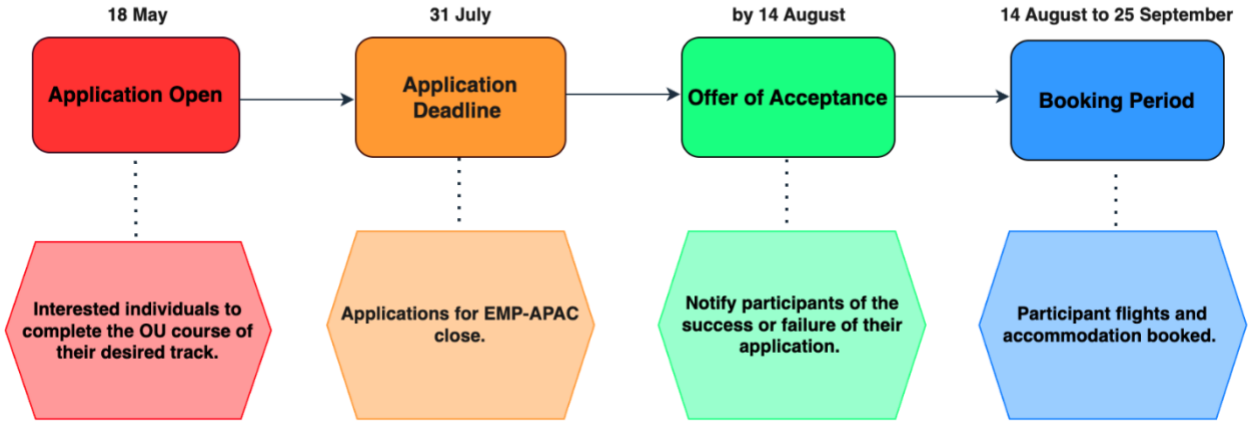
This year's EMP-APAC will be held in person.

The application period is detailed below, please make note of the dates.

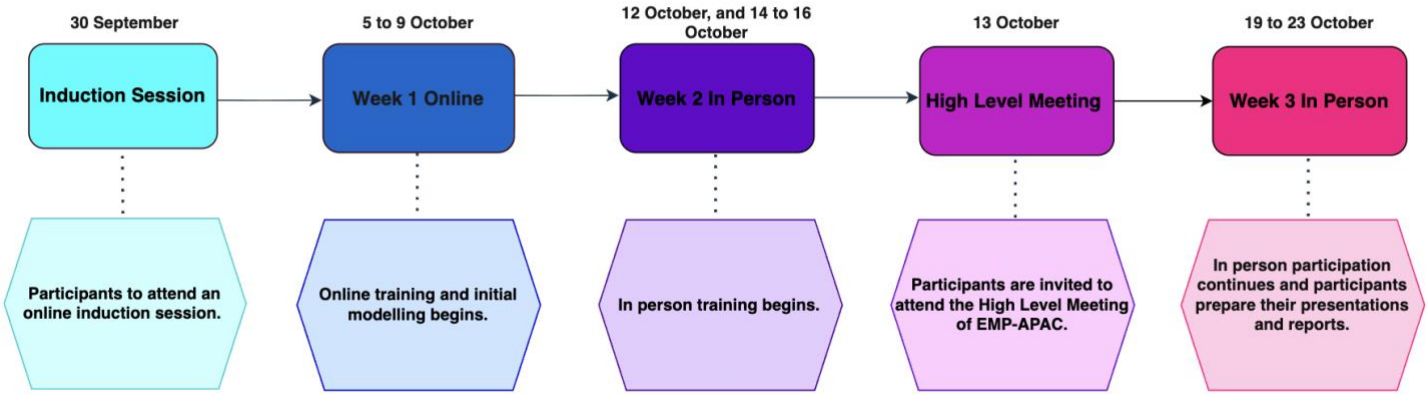
The application period will shortly be followed by the training period, see below for dates and details.

Please note, the “Electricity Transition Playbook” is an in-person week-long course that will commence in Week 3.

Application Period and Process



Training Period



During EMP-APAC 26, you will acquire energy and resource modelling skills using one of the following open-source modelling tools for sustainable development pathways under leading academics and researchers in the field on model-informed development strategies. There are seven tracks. They focus on and comprise of:

- **Energy System Modelling using the Modelling User Interface for OSeMOSYS (MUIO)**

  This course will help you to understand what investments, when, and at what scale are needed in the energy sector to meet the growing demand for energy while meeting security, environmental, and other constraints. Special considerations will be made for modelling the flexibility of the electricity system, to account for high renewables penetration.

- **FINPLAN (Financial Planning of Energy Infrastructure) and Investment Pipelines**

  This training course will provide basic knowledge on financial theory, will show how financing is done in the power sector across the world, with primary focus on developing countries, and will demonstrate how to carry out financial analysis of power projects using FINPLAN.

- **Introduction to CLEWs: Climate, Land-Use, Energy, and Water Systems**

  This course will teach you how to analyse policy decisions on issues such as the promotion of clean energy, competition for water and agricultural modernisation by teaching how to define model components, linking them together in an integrated system representation, populating the model with data, running a model, and interpreting results using CLEWs.

- **OnSSET / The Global Electrification Platform**

  This course will help you learn about geospatial energy modelling, how to build your own electrification analysis, how to include the geospatial dimension in your energy modelling to unlock new dimensions and gain an understanding of the earth's different energy resources, and how to incorporate them in your energy modelling.

- **Infrastructure and Climate Resilience [NISMOD]**

  This course will introduce you to spatial infrastructure risk analysis, focusing on climate-related hazards, direct damages to assets, and disruption to infrastructure services. You will use spatial data to build network models of infrastructure, estimate flows, failures, and their impacts on people and economic activity, and learn quantitative risk analysis methods to support screening and prioritisation of interventions for infrastructure resilience and adaptation to climate change.

- **Energy Access Explorer: A data–driven, Integrated and Inclusive Approach to Planning for Achieving Universal Access to Energy for Equitable Development**

  EAE will introduce the importance of spatial data and analytics for providing actionable insights regarding the expansion of clean energy services for socio-economic development. You will work on practical hands-on activities to identify high priority areas for energy access interventions. That is, through the front-end of the application. You will also be introduced to and work on the backend infrastructure (through the user-friendly interface of the dynamic information system) to develop an EAE application for a given geography of interest.

- **Electricity Transition Playbook**

  This course will guide you through the key steps required to successfully deliver an electricity system transition. It will use an engaging "lectures and case studies" approach to set out how to create a long-term vision for the electricity mix. It will build understanding of the key elements of political support, policy and regulatory delivery mechanisms, network infrastructure, and operational requirements, all framed by enabling technologies, supply chain, and workforce needs and consumer and public buy-in. You will also bring your own case study to the course (e.g., a country or region), to work on collaboratively with ICTP convenors and other participants. This will bring the course material to life and ensure practical value when returning home.

  Please be advised, this course is an in-person week-long course, not a three-week course, and is likely taking place in the final week of the EMP.

Additionally, a track focusing on the MESSAGE tool will be hosted by the sponsorship of the Asian Development Bank and the support of the International Atomic Energy Agency. This track is not subject to applications, as candidates are preselected based on ongoing engagements.

Each course has two parts:

- **Self-paced study**: You will complete the track of your choice and attach the certificate of completion on your application form. After participant acceptance an Induction Session will take place (30 September), where the running of the event and a general introduction to the course will be given. Week 1 of the EMP (5 and 9 October) will be conducted online. Coaching and troubleshooting sessions will be scheduled to support you and further your modelling knowledge.
- **In-depth hands-on training** Week 2 and Week 3 (12 to 23 October) is comprised of an interactive component with dedicated trainers (except for the “Electricity Transition Playbook”, which is an in-person week-long course and will take place in week 3). You will receive further coaching and training on using the tool from your chosen track for a national case study. You will be required to develop a report and an 'elevator pitch'

presentation for a senior decision-maker. Then you will present the Presentation and Report at the end of Week 3 (23 October).

Finally, you will receive a certificate from on successful completion of the training, once the presentation and report are complete.

13 October will be dedicated to:

- **A High-Level Strategic Dialogue** of government officials, representatives of international organisations, and the expert community on planning and policies for national and sustainable development for the 2030 Agenda.

Application

There is no fee to attend; however, competition for space is high, and space is limited. Applicants interested in participating in the EMP-APAC are required to complete the application form with the attached using the link below:

https://loughboro.qualtrics.com/jfe/form/SV_9KV7hd2hJXc8l1A

This form has a 'Personal Details' section and an 'Application' section, where you are required to share information such as, but not limited to, your current job responsibilities, motivation for the application, and field of interest. This will subsequently be taken into consideration for the application process.

1. In order to be considered, you **must attach the Open University certificate** of completion for your chosen track to your application.

2. Additionally, you are required to complete the 'Applied Political Economy Analysis for Energy Modelling' course available on the Open University website, and attach the certificate of completion on the application form. Please note, this course is available only in English.

3. Furthermore, a stamped **Letter of Commitment** stipulating **an express statement from participants' respective institutions towards attendance of the module of choice** is **also mandatory** for attendance. To apply, you will have to demonstrate:

- That the output of your study is in demand by the government that you represent; or
- That the skills, tools, and teaching material that you acquire will be used in university teaching or government planning knowledge management; or

- That the output will fit into policy-relevant research to be published on a visible platform.

Supporting documentation will require a letter from a head of unit or higher (government) or head of department or higher (university and others). Exceptions will be made for selected candidates from participating organisations and ongoing technical assistance programmes, and applicants will be notified via those channels. Priority will be given to participants from countries with a demonstrated need and ability to apply the training to policy development. The selection of participants will include considerations of equity, diversity, and inclusion.

4. Lastly, you must submit a **Letter of Motivation**, **stating why you should be selected for the course, and how your background knowledge and experience makes you ideal for the course (1 page long).**

The deadline to submit the application form will be 12:00 PM (GMT) 31st of July. It should be noted that spaces are limited and the application process is highly competitive.

Furthermore, full-time commitment towards the EMP-APAC is crucial.

Funding for in-person participants

Funding will be made available for some in-person participants to cover the cost of flights and/or accommodation. However, participants not selected for funding can still attend at their own expense, or can be funded by other organisations. Please specify in your application if you wish to be considered for funding.

IT requirements

Note that you will require a computer with stable internet access to participate in the training. It is recommended, for all tracks, that participants have at least 8 GB of RAM and a relatively new computer. Specific tracks have additional computer requirements above and beyond this minimum:

- CLEWs - Windows 10 computer
- Energy System Modelling using the Modelling User Interface for OSeMOSYS (MUIO) - Windows 10 or later, 8GB RAM, MS Office

Further information contact: inquiries@optimus.community

Partners

In alphabetical order:

- Asian Development Bank (ADB)
- Clean Cooking Alliance
- Climate Compatible Growth Programme (#CCG)
- Department of Energy Security and Net Zero (DESNZ)
- Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)
- United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP)
- Energy Sector Management Assistance Program (ESMAP)
- Green Grids Initiative (GGI)
- International Atomic Energy Agency (IAEA)
- International Renewable Energy Agency (IRENA)
- Imperial College London (ICL)
- Kartoza
- KTH Royal Institute of Technology (KTH)
- OpTIMUS Community of Practice
- Open University (OU)
- Politecnico Di Milano
- Simon Fraser University
- Sustainable Energy for All (SEforALL)
- The Loughborough Centre for Sustainable Transitions: Energy, Environment, and Resilience (STEER)
- United Kingdom Foreign, Commonwealth and Development Office (UK FCDO)
- United Nations Economic Commission for Africa
- United Nations Department of Economic and Social Affairs (UNDESA)
- United Nations Development Programme (UNDP)

- University of Cambridge – Centre for Global Equality
- University of Oxford
- World Resources Institute (WRI)
- World Bank Group (WBG)
- 2050 Pathways Platform