



MEDEA: “Metrology – Enabling Developing Economies in Asia”

APLMF Training Course on the Verification and Pattern Approval of Electricity Meters and EV Supply Equipment

18 January - 21 January 2021, Online, China & Korea

Introduction

Accurate measurement of electricity meters and EV Supply Equipment is an important component of an economy’s metrological system. APLMF has conducted training courses for the past 20 years to support the development of an electricity measurement infrastructure that inspires confidence and trust within the region. This ensures consumers, industry, manufacturers, and government are benefitting equally and promotes fair trade with greater transparency, accuracy, and long-term sustainability. Due to electricity energy sold both within and between economies using electricity meters it is important that legal metrology authorities use international recommendation test procedures to ensure accurate measurement systems. This training course is designed for personnel with responsibility to develop an appropriate metrological infrastructure for testing of electricity meters and EV Supply Equipment in their own economies. Participants are expected to train others when they return to their own economy.

Objective

The training course on Electricity Meters and EV Supply Equipment is aimed specifically at training trainers who will lead the development of knowledge and skills of verification officers within Asia Pacific region and the establishment of uniform understanding in national or regional level in electricity measurement.

This training course is composed of lectures and Q&A activities. The lectures will cover:

Session 1: Introduction of electrical energy measurement

- (1) Electricity distribution systems
- (2) Electrical power and energy (principle)
- (3) Traceability scheme and the chart in China
- (4) Functionality of smart meters in China

Session 2: Electricity meter verification of R46 and legal metrology system in China

- (1) Electricity meter verification of R46
- (2) Legal metrology system of electricity energy in China

Session 3: Understanding of Electricity meter & its application

- (1) Understanding of Electricity meter
- (2) Technical Requirements of Electricity meter
- (3) Type approval of Electricity meter

Session 4: Understanding of EV Supply Equipment

- (1) Understanding of EV Supply Equipment
- (2) Technical Requirements of EV Supply Equipment
- (3) Type approval of EV Supply Equipment

Course Delivery

Training will be delivered using 4 two-hour zoom sessions held on consecutive days starting on 18 January 2021. Participants will be expected to attend each session and to complete some reading between sessions. A maximum of 20 participants will be accepted for the training. Participants will be able to ask the trainers questions throughout each session. A test run will be at **11 am (UTC/GMT +8 hrs) on Monday 11 January 2021** to ensure everyone has the technology working. During the test run participants will introduce themselves and we will share the collated results regarding how electricity meters are managed in each economy. You will receive a zoom link when you are accepted for the course.

The workshop will be recorded and placed on the APLMF website so others can view it at a later date.

Technical Requirements

The *recommended technical requirements* for optimal results to participate in the online training on the Zoom platform are as follows:

- Intel Laptop/PC from 2009 or higher
- Dual Core 2Ghz or higher
- Windows 10
- Google Chrome 56 or higher
- HD USB Webcam
- Headset/Mic combo or Earphones + USB Microphone
- Network Connection: Recommended 2Mbps Up/2Mbps Down network bandwidth

Organizers:

1. Physikalisch-Technische Bundesanstalt (PTB)
2. Asia-Pacific Legal Metrology Forum (APLMF)

Supporting Organizations:

1. National Institute of Metrology, China (NIM)
2. Korea Testing Certification, Korea (KTC)

3. Zhejiang Institute of Metrology, Zhejiang, China (ZJIM)

Trainers:

Dr. Huang Hongtao, NIM, China
Mr. Ji-Hyun UM, KTC, Korea
Mr. Min-Joo Ham, KTC, Korea
Mr. Zheng Jianzhong, ZJIM, China

Registration:

Please complete the attached **Nomination Form** and send it to the PTB contact person Anne Hoepfner by 15 December 2020.

Contact Persons:

- **APLMF Secretariat**

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- **PTB Contact Person:**

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- **NIM Contact Person:**

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Program Verification and Pattern Approval of electricity meters and EV Supply Equipment

Monday 18 January

Time (UTC/GMT +8 hrs)	Details	Presenter
11:00 – 11:45	Session 1: Introduction of electrical energy measurement	Dr. Huang Hongtao
11:45 – 12:00	Break Time	
12:00 – 12:45	Session 1: Introduction of electrical energy measurement	Dr. Huang Hongtao
12:45 – 13:00	Q&A	Dr. Huang Hongtao

Tuesday 19 January

Time	Details	Presenter
11:00 – 11:45	Session 2: Electricity meter verification of R46 and legal metrology system in China	Mr. Zheng Jianzhong
11:45 – 12:00	Break Time	
12:00 – 12:45	Session 2: Electricity meter verification of R46 and legal metrology system in China	Mr. Zheng Jianzhong
12:45 – 13:00	Q&A	Mr. Zheng Jianzhong

Wednesday 20 January

Time	Details	Presenter
11:00 – 11:45	Session 3: Understanding of Electricity meter & its application	Mr. Ji-Hyun UM
11:45 – 12:00	Break Time	
12:00 – 12:45	Session 3: Understanding of Electricity meter & its application	Mr. Ji-Hyun UM
12:45 – 13:00	Q&A	Mr. Ji-Hyun UM

Thursday 21 January

Time	Details	Presenter
11:00 – 11:45	Session 4: Understanding of EV Supply Equipment	Mr. Min-Joo Ham
11:45 – 12:00	Break Time	
12:00 – 12:45	Session 4: Understanding of EV Supply Equipment	Mr. Min-Joo Ham
12:45 – 13:00	Q&A	Mr. Min-Joo Ham
13.00– 13:30	Action Plans	APLMF