

## Activities



### Webinar on Advanced Metering Infrastructure (AMI)

AMI is one of the topics of interest in the power industry. Although there is a large disparity between developed and developing regions, information sharing on its global development would be beneficial to the members. K-Electric in Pakistan, IERE member, proposed to hold a webinar on Advanced Metering Infrastructure (AMI). The Central Office obtained information from experts of different regions and received their willingness to present their situations. This webinar focuses on making the system smarter to optimize the power grid, improve reliability, and reduce costs, with the hope of discussing technical issues and future plans.

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► Aug. 15 updated

Open to the Public

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#### Open to the Public (This Time)

This is our eighth web event for all the IERE members. However, the Webinar is open to the public this time to make IERE's activities widely known. Please join us and discover new perspectives.

#### FREE of Charge

Not only IERE members but also anyone interested in the lecture can join for FREE of charge.

#### Webex Registration

The webinar will use the Webex Meetings system. Webinar registration is required.

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## Moderator



**ISHII Hideo**

Professor, Waseda Univ.  
Japan

## Lecturers



**ISHII Hideo**

Professor, Waseda Univ.  
Japan

**Abstract:**

In Japan, the installation of the first generation smart meters will soon be completed. This will allow power utilities to measure their electricity consumption data every 30 minutes. Meanwhile, the Ministry of Economy, Trade and Industry has held a committee meeting for about two years from 2020 to consider the specifications of the next generation smart meters, with members including experts, electric power companies, telecommunications companies, and related manufacturers. The next generation smart meters are positioned as key devices to promote digital transformation in the electricity sector, and it has been decided that they will measure not only the amount of power consumed but also voltage, and that they will be equipped with IoT routes to exchange information with devices such as gas and water meters, solar power generation, and storage batteries installed at consumers. The next generation smart meters are scheduled to be introduced from the second half of fiscal year 2025. In this presentation, their specifications and expected applications are introduced.

**Biography**

Hideo Ishii joined Tokyo Electric Power Company (TEPCO) in 1988. He was a visiting scientist in Massachusetts Institute of Technology from 1989 to 1991. He received Ph.D. from the University of Tokyo in 1996. From 2010, he has been engaged in some major smart grid related National projects in Japan as an organizer. He is now a Professor with Advanced Collaborative Research Organization for Smart Society (ACROSS) at Waseda University. His current activity is in Electric Energy System, especially regarding Demand Response (DR) and integration of distributed energy resources (DER) including renewable energy. He has been leading DR standards in Japan. Since August 2020, he has been a Chair of IEC TC 8 SC 8C. Since December 2023, he has been a visiting researcher at National Institute of Advanced Industrial Science and Technology (AIST). During 2020-2022, he was a member of Next-generation smart meter committee.

Close



**Valentina D'Amelio**

Innovations Technical Partner and Approval Expert, NMI  
Netherlands

**Abstract:**

The European Union aims to achieve carbon neutrality by 2050, targeting a 55% reduction in emissions by 2030 under the "Fit for 55" initiative. This comprehensive strategy encourages the adoption of renewable energy sources—like photovoltaic panels, wind turbines, and batteries—and mandates a shift towards electric vehicles (EVs), complete with necessary charging infrastructure (EVCS). This transition is transforming energy consumption patterns as consumers increasingly become "prosumers" who both produce and consume energy. By 2035, the EU will cease the sale of new internal combustion engine vehicles, propelling the need for robust EVCS infrastructure.

The complexity, unpredictability, and instability of managing the evolving energy system are escalating challenges that demand a sophisticated solution.

Advanced Metering Infrastructure (AMI), pivotal in providing real-time data, is crucial in this landscape.

This session will assess the progress of smart meter implementation across the EU, examining the supporting directives, regulations, and the technological advancements in communication and software that are shaping the future of smart metering.

#### **Biography**

Dr. Valentina D'Amelio is a seasoned professional with over 12 years of expertise in the electrical and energy sectors. Since joining NMI (Dutch Measuring Institute) in 2016, she has served in various roles, currently as a Technical Partner focusing on energy transition. Her work promotes innovation and education, particularly in the European and global certification of kWh meters and their safety features.

Dr. D'Amelio earned a master's degree in aerospace engineering from the University of La Sapienza, Rome, in 2005, and a PhD in System Engineering from TUDelft, Netherlands, in 2010. Her doctoral research focused on applying artificial intelligence to multidisciplinary design methodology. She is dedicated to advancing technologies and systems that enhance energy sustainability and transition.

Close



#### **BAI Jingfen**

Senior Expert of Department of Metrology, CEPRI  
China

#### **Abstract:**

State Grid Center of Metrology (SGCM) is the top metrological institution of SGCC. The aim of SGCM is to establish and maintenance the measurement system of SGCC including to provide technical support for AMI system construction. The AMI system of SGCC which covers 26 provinces in China, and serves over 1.1 billion populations is the largest AMI system in the world with 590 million smart meters. The architecture of AMI system in SGCC includes five layers, which are master station, remote communication network, data concentrate unit, local communication channel, smart meter and other sensing device. The presentation will introduce the key technology of these five layers, respectively. And technological improvement trends will be also promoted in the end of presentation .

#### **Biography**

Mrs. Bai Jingfen ( Senior Member of IEEE, Member of CIGRE) worked as a engineer for CEPRI since she received her M.E. degree from Beihang University of China in 2007. She has been with metering system and metrology technology of State Grid Corporation of China (SGCC) for more than 13 years, engaged in study on power system metering and metrology technology for scientific research, calibration and test server, equipment development. As the convenor of IEC TC85 MT25, she took charge of the maintenance of IEC 60477-1 and IEC60477-2, and received "IEC 1906" Award in 2022. She has published 29 papers and 3 books and be with more than 20 patents.

Close



#### **Fazal-e-Rehman**

Deputy General Manager, K-Electric  
Pakistan

#### **Abstract:**

In this webinar, we will explore K-Electric's decade-long journey with its Advanced Metering Infrastructure (AMI) system. K-Electric, being the only vertically integrated power company in Pakistan, has emerged as a leader in the energy sector. We will focus on the comprehensive tracking of smart meters, both before and after installation, as well as the seamless process from field installation to final billing. Additionally, we will delve into the transformative impact of AMI on K-Electric's business operations, highlighting the various technologies integrated into their smart meters. The webinar aims to provide insights into K-Electric's strategic roll-out and KPIs that have contributed to its leadership in AMI technology among Pakistan's DISCOs.

### Biography

Fazal-e-Rehman, a tech enthusiast, is currently leading the AMI Process, Projects, Support, and Governance. He has revolutionized the field of Advanced Metering Infrastructure with his significant contributions, including the ongoing implementation of a Universal Headend System and a comprehensive in-house revamp of the AMI landscape. His most notable achievement is the design of the AMI work system, which serves as the pillar, foundation, and driver of AMI in a single vision. This system, which encompasses all guidelines, defined standards, quality, and governing framework, has brought about a transformative change in K-Electric's AMI. Currently, all processes and teams are operating under this system. Fazal's leadership at K-Electric has been instrumental in driving digital transformation and overseeing comprehensive AMI implementations. His journey, from his graduation in Electrical Engineering from GIKI University to serving as a project manager at P&G and his current leadership role, is a testament to his dedication, technical prowess, and visionary leadership.

Close



### Adnan Ali Shaikh

Head of the AMI department, K-Electric  
Pakistan

#### Abstract:

In this webinar we will discuss our long-term vision for AMI, focusing on advancements, optimization, and sustainability. Our vision is rooted in the belief to revolutionize K-Electric metering infrastructure of today & tomorrow by enabling smart metering solutions.

Our presentation will explore the latest advancements in AMI, demonstrating how these innovations are revolutionizing the way we manage and distribute energy. We will delve into the optimization strategies that are not only enhancing the efficiency of our operations but also improving the customer experience.

Sustainability is at the heart of our AMI vision. We will discuss how AMI technologies are enabling us to reduce our carbon footprint, conserve resources, and contribute to a more sustainable future. We want to innovate and provide cutting edge solutions in all the areas of AMI to provide data driven enabling to provide data driven power services and enhanced visibility over the generation, transmission and distribution.

#### Biography

Adnan Ali Sheikh, lead of the Advanced Metering Infrastructure department at K-Electric, Adnan brings over 16 years of industry experience to the table. Adnan's journey with K-Electric began in August 2008 when he joined as a manager, following his tenure as an E&I Engineer at AES. His leadership and innovative approach have been instrumental in driving significant changes within the company.

Under his guidance, the AMI department embarked on the pioneering initiative of implementing smart meters, setting a new standard for all DISCOs across Pakistan. This marked the beginning of a new era in metering infrastructure, making AMI a standout department in K-Electric.

Throughout his tenure, Adnan has successfully executed numerous projects, each contributing to the enhancement of AMI. His relentless pursuit of excellence and commitment to his work have played a crucial role in shaping the AMI landscape in Pakistan.

Close

## Program

### Program (UTC)

July 23, 2024, 7:00–9:15 (UTC)

### Opening

7:00–7:05 (UTC) Opening Address

TAKEI Katsuhito  
IERE Secretary General

## Lecturers

7:05–7:30 (UTC) Current status of smart meters in Japan and expectations for next-generation AMI

ISHII Hideo  
Professor, Waseda Univ.

7:30–7:55 (UTC) State of the art of smart meters Rollout, Requirements and Communication Technologies in the EU

Valentina D 'Amelio  
Innovations Technical Partner and Approval Expert, NMI

7:55–8:20 (UTC) Application and Prospect for Advanced Metering Infrastructure of State Grid Corporation of China

BAI Jingfen  
Senior Expert of Department of Metrology, CEPRI

8:20–8:45 (UTC) Current Landscape, Roll-out Strategy & Current KPI of K-Electric AMI

Fazal-e-Rehman  
Deputy General Manager, K-Electric

8:45–9:10 (UTC) Advancements, Optimization, and Sustainability for a Long-Term AMI Vision

Adnan Ali Shaikh  
Head of the AMI department, K-Electric

Fazal-e-Rehman\*  
Deputy General Manager, K-Electric

\*Due to some reasons, the lecturer was changed from Adnan Ali Shaikh to the previous lecturer, Fazal-e-Rehman.

## Closing

9:10–9:15 (UTC) Closing

ISHII Hideo  
Professor, Waseda Univ.

## Time Zone

The webinar will take place at 7:00 a.m. in UTC. Please make the proper time zone conversion to match the start time in your area.

UTC +2:00	9:00–11:15	Amsterdam, Brussel, Essen, Paris
UTC +5:00	12:00–14:15	Karachi
UTC +7:00	14:00–16:15	Jakarta
UTC +8:00	15:00–17:15	Beijing, Singapore, Manila, Kuala Lumpur
UTC +9:00	16:00–18:15	Seoul, Tokyo
UTC +10:00	17:00–19:15	Brisbane
UTC -4:00	3:00–5:15	Montréal
UTC -5:00	2:00–4:15	San Antonio
UTC -7:00	0:00–2:15	Vancouver

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## Register

### Registration

- **FREE of Charge**

This Webinar will open to all applicants for FREE of charge, not only IERE members.

- **Webex Registration**

To join the webinar, you need to register. Please click the registration icon. You will be automatically transferred to the Webex Meetings registration site. Please fill in the necessary information and register there. The Webinar link will be sent to you. Please join the webinar by the link URL 5–10 minutes earlier to avoid the last-minute problems.

The webinar will be recorded and made available on VIDEO ON DEMAND for approximately one month after the webinar. Webinar registration is required just to watch this VOD.



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## MUST-READ

### TIPs for Attendees

#### Be Prepared before Webinar Starts

Review our webinar tips for attendees and avoid technical issues by testing Webex Meetings on your device prior to the day of the webinar.

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#### Finding Chat Box

The Chat Box can be opened through your Webex menu. This is used for submitting your content-related questions anytime. Please specify which presenter the question is for. During the Q&A time, the moderator will select the posted questions and the presenter will answer them.

In addition, technical questions about webinar connections such as images and sounds can be put in the Chat Box. The staff of the Central Office will support you. If you have any questions before starting the webinar, please email to "office(at)iere.jp". [Please substitute (at) with @]

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#### Webinar Recordings

The webinar is recorded on the Webex system and is to be on demand. Webinar registrants will be able to view the video footage after the Webinar ends.

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