

## Japan Society of Applied Physics, Advanced Power Semiconductor Subcommittee 20th study **session**



## The future of the electricity network that supports Japan

ÿ Date and time: Thursday, September 2, 2021, 13:00-17:30

ÿ Location: Online

As efforts toward carbon neutrality in 2050 become more active, electric power, the most important infrastructure that supports Japanese industry, is becoming more active. While the importance of networks has been reaffirmed, their vulnerabilities as systems have also been highlighted. This will continue further in the future.

There are a number of issues that need to be addressed immediately, including instability of the grid due to the introduction of large amounts of renewable energy and vulnerability to disasters such as earthquakes.

It is accumulated. Efforts to solve these issues can be made by maximizing the use of the current power network or by creating new

When constructing an electric power network, active progress is being made from both sides. This study group aims to develop these next-generation power networks. We will introduce the latest efforts related to technology and discuss the future direction of technology development.

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Opening greetings 13:00ÿ13:05

1. Energy system integration - Transformation of power and energy systems and challenges for CN - 13:05-13:35

Kazuhiko Hagimoto (University of Tokyo)

2. Expectations for DC power transmission, distribution and power supply systems to achieve carbon neutrality

13:35-14:05

Keiichi Hirose (New Energy and Industrial Technology Development Organization)

3. Introduction status and future trends of DC interconnection equipment in the Chubu region

14:05ÿ14:35

Yoshinari Mochizuki (Chubu Electric Power Grid)

4. A Medium-Voltage Transformerless STATCOM Based on the Modular Multilevel SDBC Converter Luxman Maharjan (Fuji Electric)

14:35-15:05

Break 15:05-15:25

5. Next generation energy management system

15:25ÿ15:55

16:25-16:55

Yasuhiro Hayashi (Waseda University)

15:55-16:25

7. Regarding the demonstration results of the Oki Hybrid Project

6. Trends in research and development of hydrogen carriers at AIST

Taku Tsujimura (National Institute of Advanced Industrial Science and Technology)

Takashi Yoshioka (Chugoku Electric Power Network)

8. Development and application examples of power converters for power transmission and distribution systems

16:55-17:25

Atsuhiko Kuzumaki (Toshiba Infrastructure Systems)

Closing remarks 17:25-17:30

ÿ Participation reception: From the WEB participation reception system (click here\*) Please register by Friday, August 27th. Noboru When recording, a written agreement to prohibited matters is required. Please note that the materials for the day will be in PDF format.

\*If this guide is in print, please access it from http://annex.jsap.or.jp/adps/pdf/kenkyuukai20.pdf.

ÿ Participation fee: (tax included) Please make online payment after registering.

Advanced Power Semiconductor Subcommittee members\*4,000 yen, Subcommittee student members 1,000 yen, General 6,000 yen, General students 1,000 yen

"If you are a supporting member of the Advanced Power Semiconductor Subcommittee, you will be treated as a member of the Advanced Power Semiconductor Subcommittee.

ÿ Advertisement acceptance: Proceedings of the conference are 4,000 yen per page. Apply online From the advertisement reception system (here). ÿdeadline: Friday, August 20th].

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