

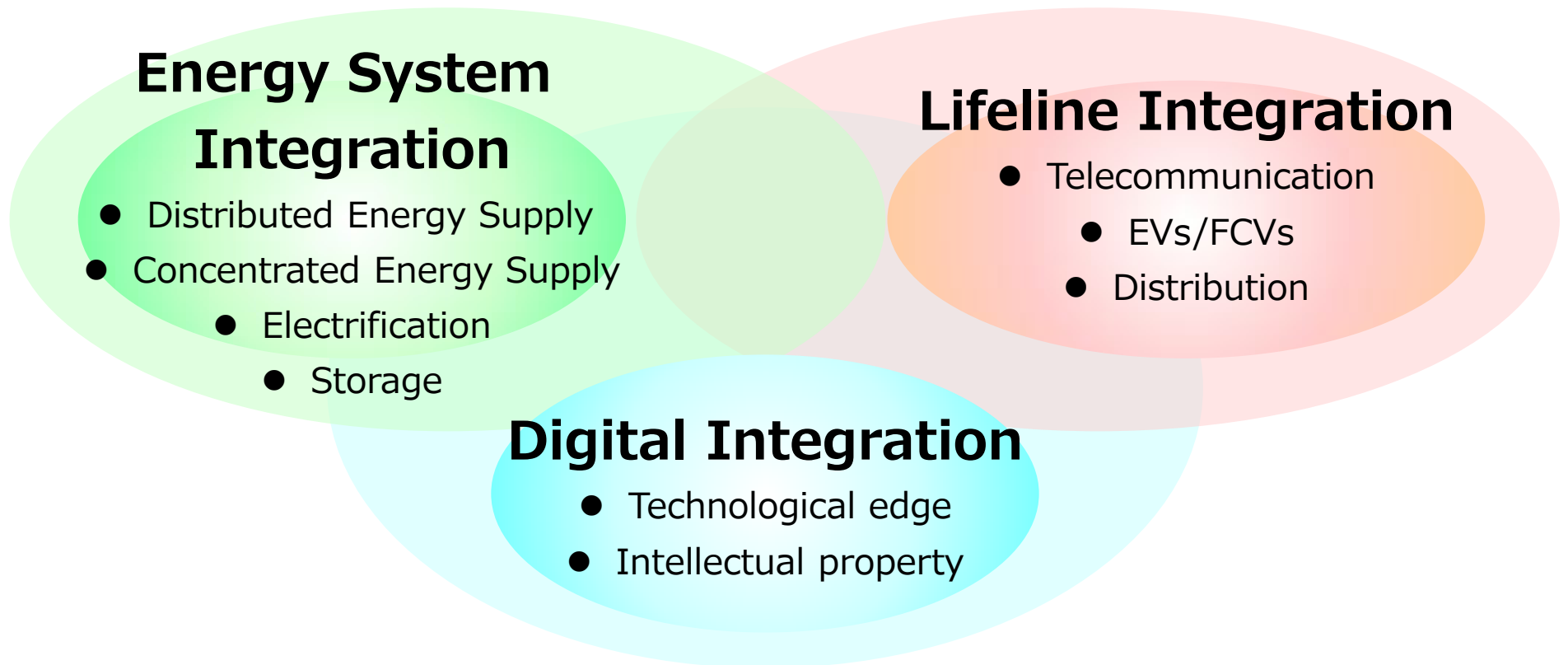
# **Session-IV: Stationary and Telecom Application**

2017/12

Ministry of Economy, Trade and Industry (METI)  
Automobile Division  
Batteries and Next-Generation Technologies Office  
Zuioh Ashihara

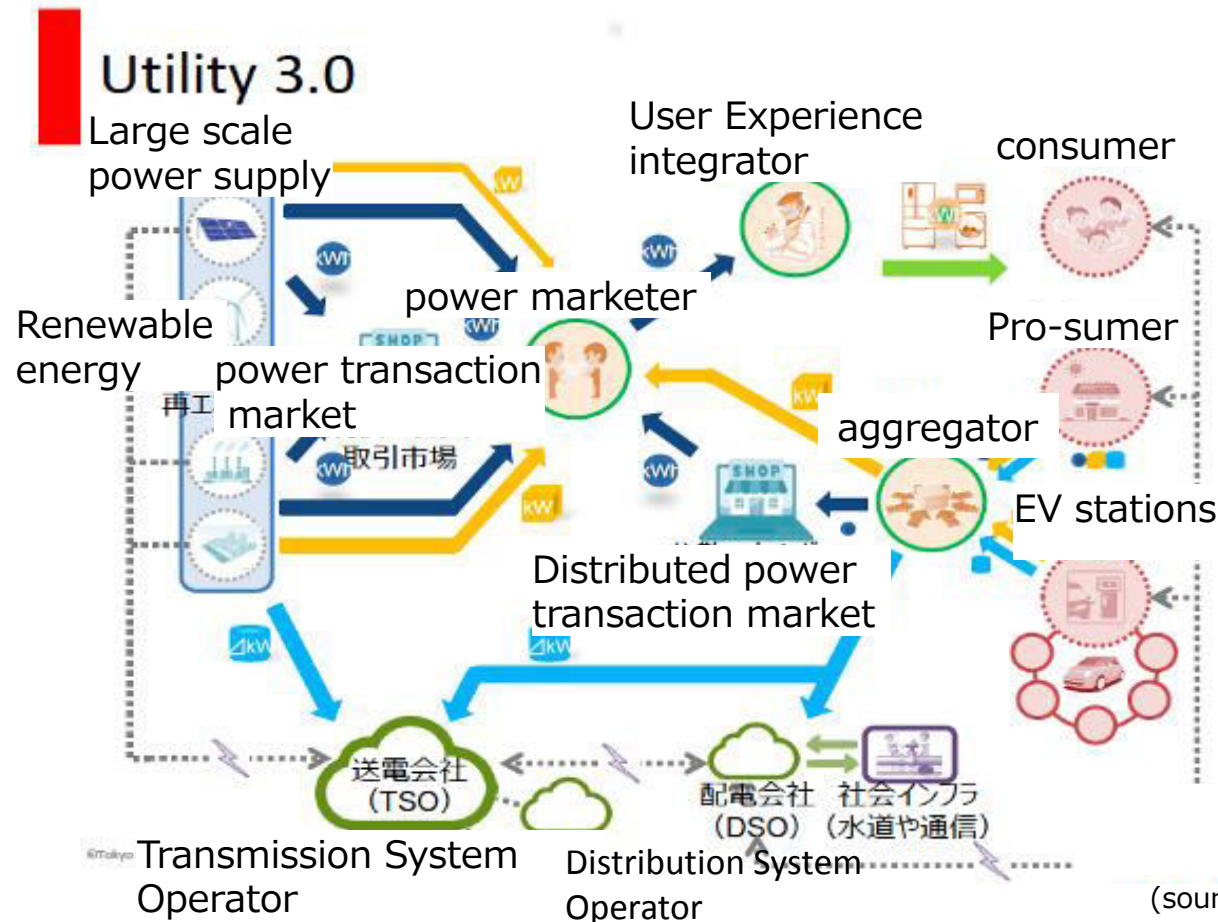
# Diversified energy leads to the integration going beyond industries

- Diversified energy resources and energy system integration leads to integration which goes beyond industries.
- Development of “hydrogen society” will be one of the key which creates new industries.



# Shifting from “possession” to “user experience”

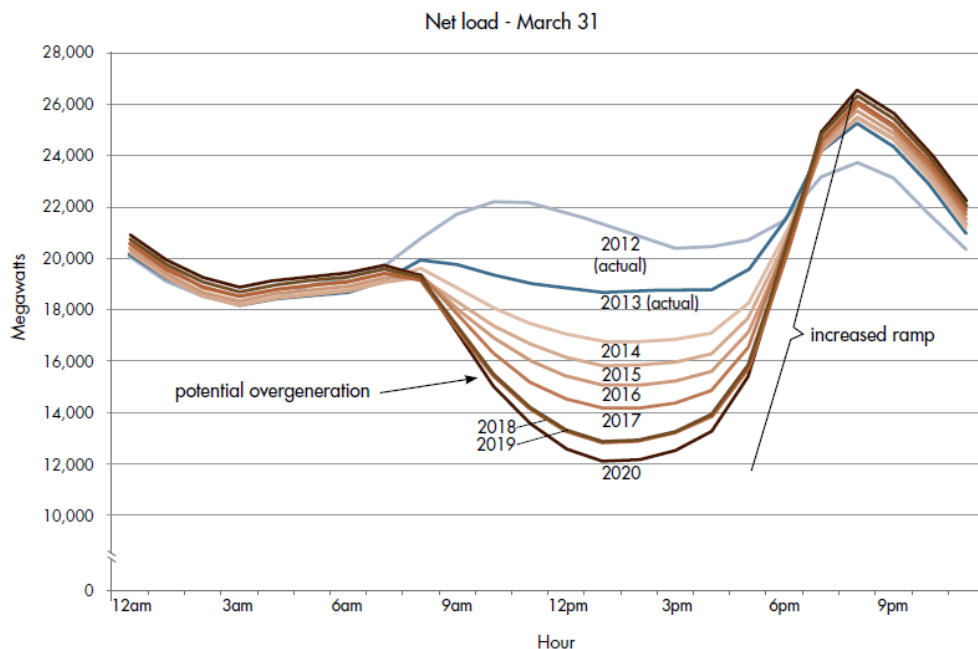
- Dramatic increase of Hydrogen Fuel cells lead to development of distributed power generation.
- IoT will be a key factor that shift from providing products to user experience.
- Distributed energy supply requires high-level dynamic telecommunications.



# Reduction of System Loading (Demand response)

- Load to regulated power supply such as thermal power generation increases with a increase of renewable energy as typified by "Duck Curve" in California in the United States.
- It is possible to reduce load to regulated power supply by applying production and use of hydrogen as a kind of demand response as a adjusting power.
- Storage battery technology and digital technology will facilitate the integrate transportation system and energy system and require telecommunication technology.

## Duck Curve (California)



## Absorption of load change by hydrogen (image)

