

Paris Session 2022



Research for the development of
DER control technology
to resolve power system congestion
(NEDO commissioned project)

SC C6

PS 2 and Question 4

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power with heart

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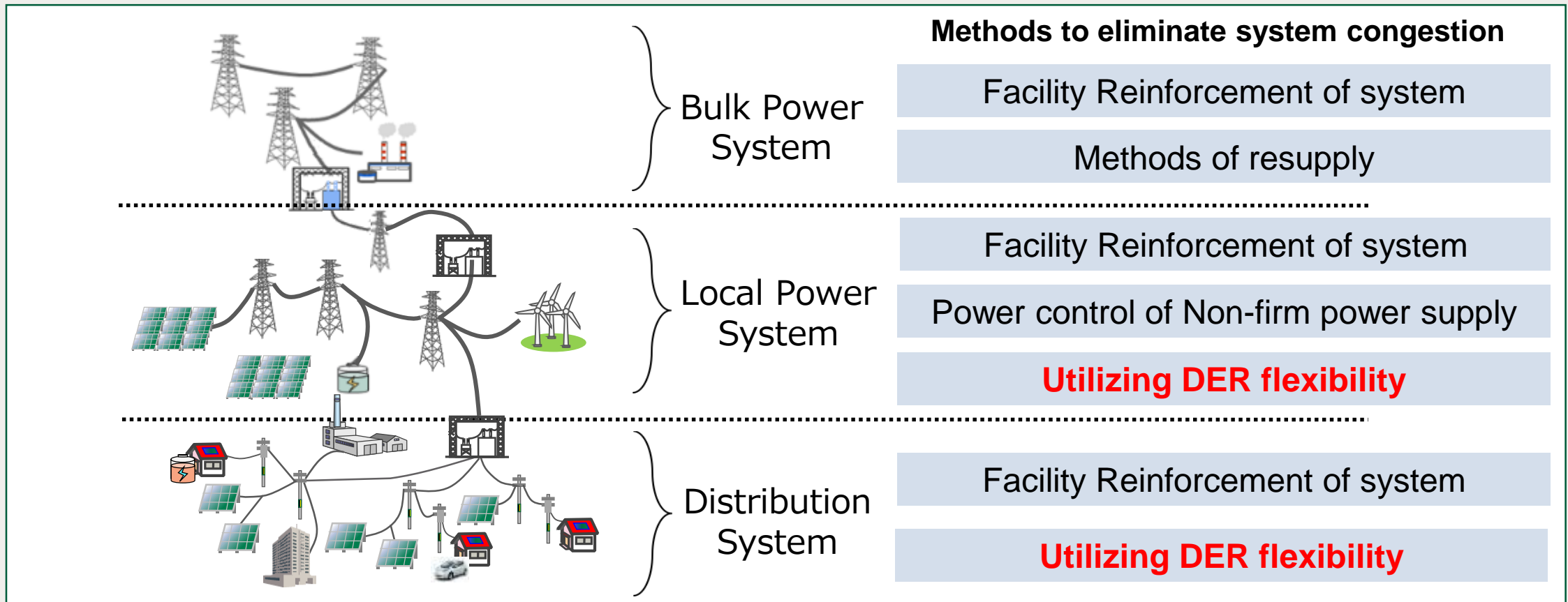
Group Discussion Meeting

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Methods to resolve system congestion in Japan

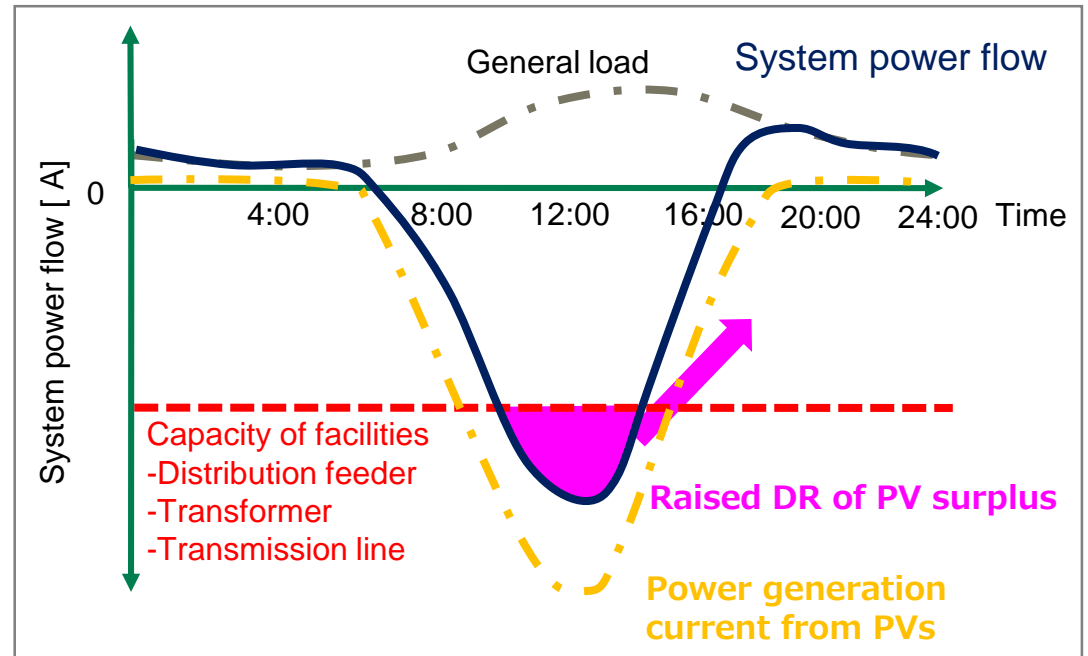
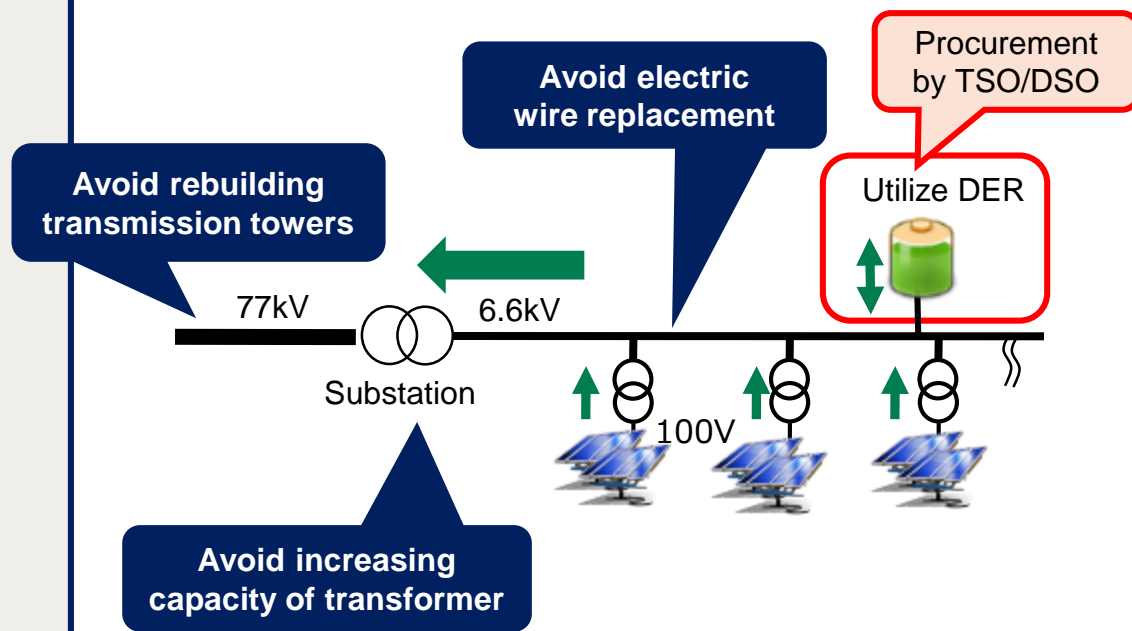
- In Japan, various methods are being considered to resolve system congestion caused by insufficient transmission capacity, including Non-firm connections and Methods of resupply.
- The potential exists to resolve system congestion by utilizing DER flexibility in some use cases.



Examples of DER utilization to avoid reinforcement of system facility

- Increased PVs may cause reverse power flow and excess capacity of system facilities.
- By utilizing DER during congestion time periods, reverse power flow can be suppressed, reinforcement of system facility can be avoided or deferred, and reinforcement costs can be reduced.

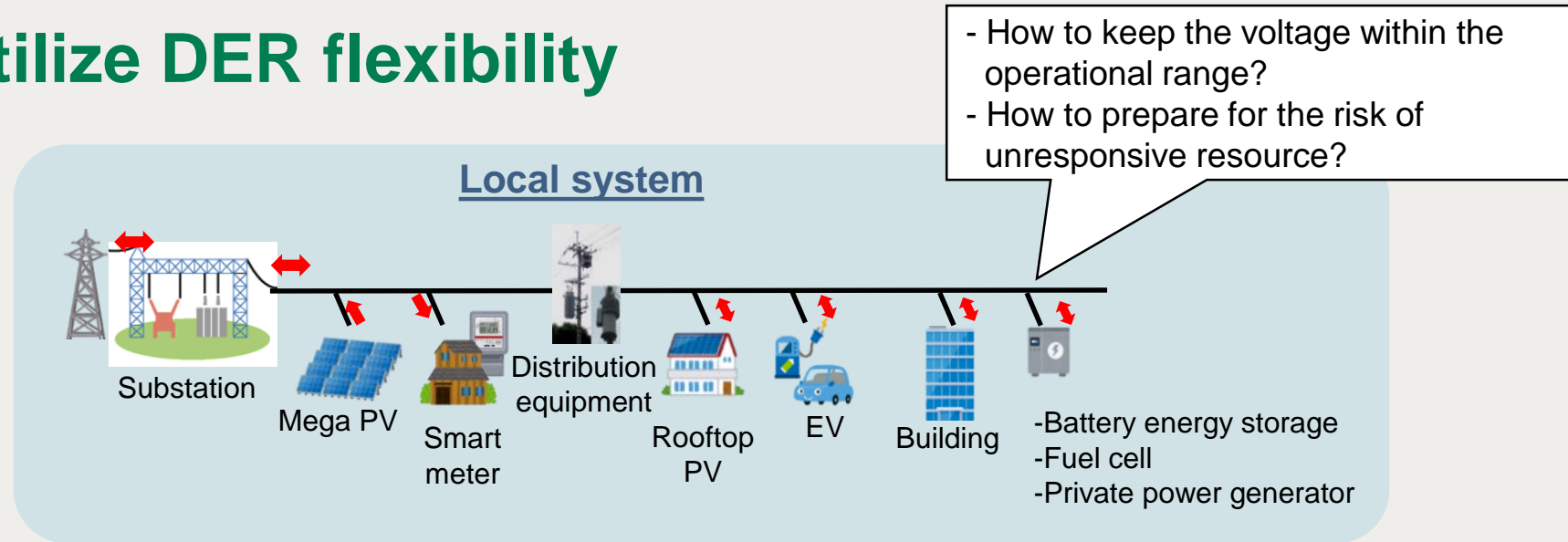
Image of avoidance or postponement of reinforcement



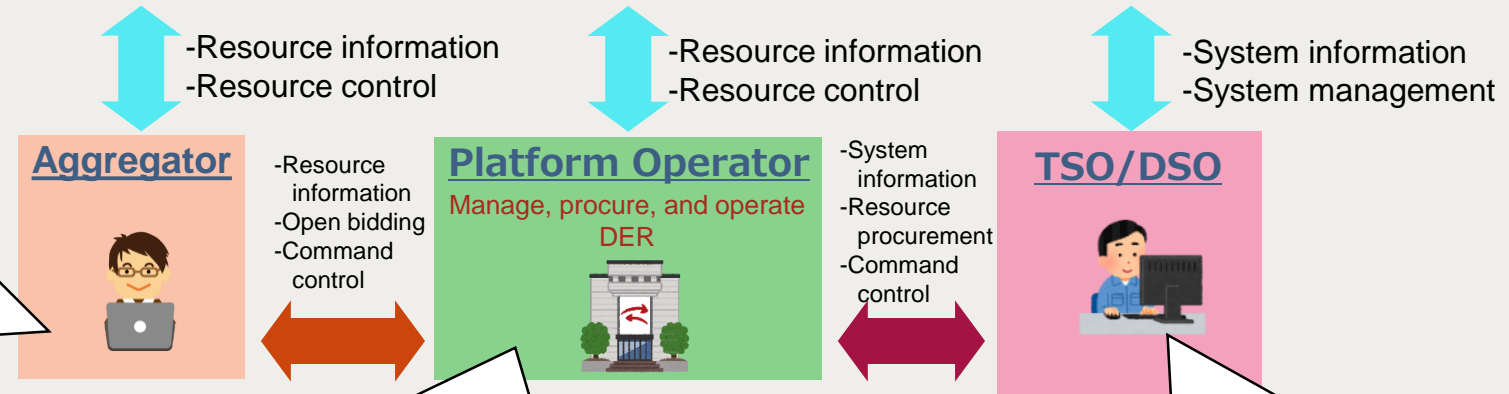
- With the quantitative evaluation using the above model case, qualitative issues were revealed.

Issues to utilize DER flexibility

【Issues in each field】



- How to manage resources?
- How to allocate the amount of DER output?
- How to determine the procurement price for sellers?



- Who is responsible?
- How to determine the market price?

- How to estimate system congestion?
- How to determine the procurement price for buyers?

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● This research will be continued to solve these issues.