



# Bridging the Currents:



## Assessing East Asia's Potential in Cross-border Electricity Cooperation

Presentation school:

Kaohsiung Municipal Kaohsiung Senior High School

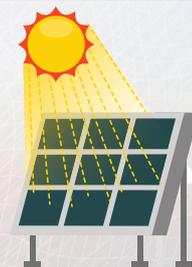
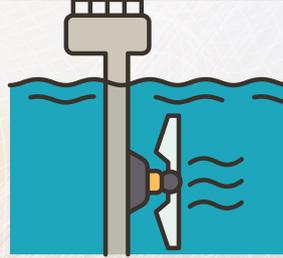
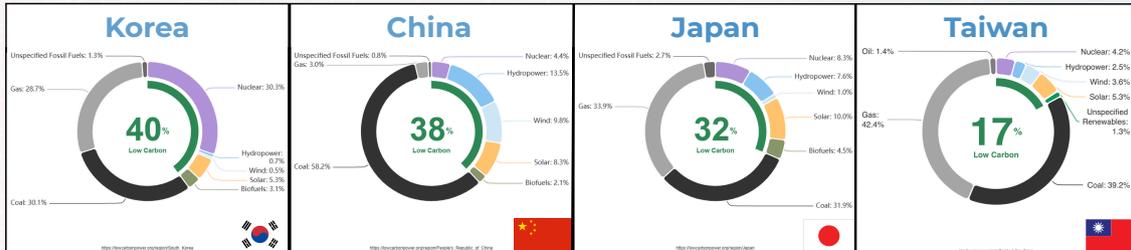
### SDGs Targets :

7(Affordable and Clean Energy)

17(Partnerships for the goals)

Low carbon rate(2024):

South Korea(40%) > China(38%) > Japan(32%)>Taiwan(17%)



### What is Cross-Border Electricity Cooperation

- 1.cross-regional power generation technology
- 2.enhance the cooperation between different regions
- 3.improve the efficiency of green energy use

### Cable Limits, Energy Bottlenecks

- 1.Cables are difficult to install in remote, mountainous, or cross-sea regions.
- 2.Transmission is hindered, leading to inefficient energy distribution.
- 3.If renewable energy cannot be delivered, it becomes wasted potential.

### Motivation and Purpose

- 1.East Asian Grid Reciprocity
- 2.Environmental sustainability
- 3.Reducing dependence on fossil fuels
- 4.Increase the use of green electricity

### Conclusion

Encourage resource sharing



Promote regional demonstration networks.



Achieve a fully connected grid.

### Research Methods

- Provide electricity information
- Provide world ocean current data
- Provide international policy information

### High Voltage Direct Current

- 1.Long distance, large capacity, point-to-point transmission
- 2.Underwater long-distance power transmission
- 3.Realize the connection between new energy generation points and AC systems

### Future Possibilities

- Wireless power transmission
- Space-based energy systems
- Alternative solutions beyond cables

### References

Electricity data(South Korea) Searched from: <https://lowcarbonpower.org/zh/region/%E5%8D%97%E9%9F%93>

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