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District Heating Model based on Energy Prosumer at South Korea

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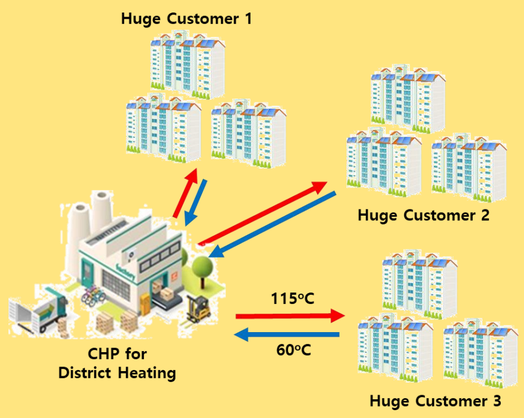
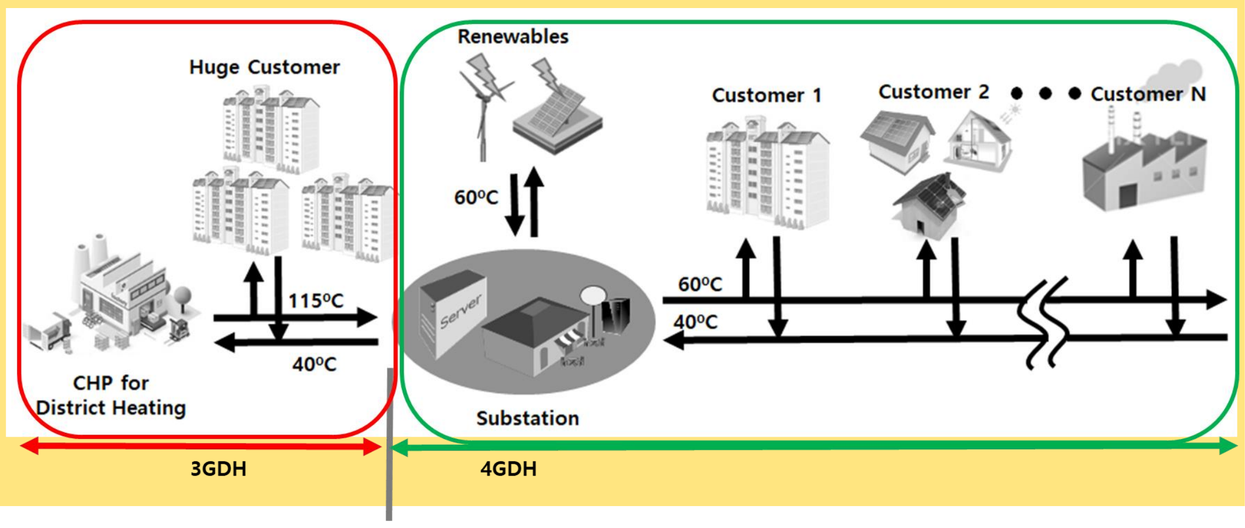
❖ South Korea Situation

- 2nd~3rd Generation of District Heating
- Huge Consumer thanks to Apartment



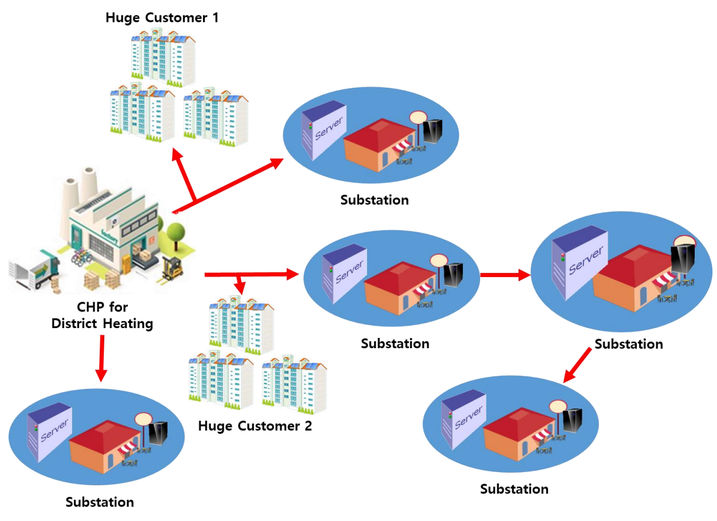
❖ Basic Concept of Next Generation DH Model

- Using Possbile Previous DH Resources
- Maintain 3GDH



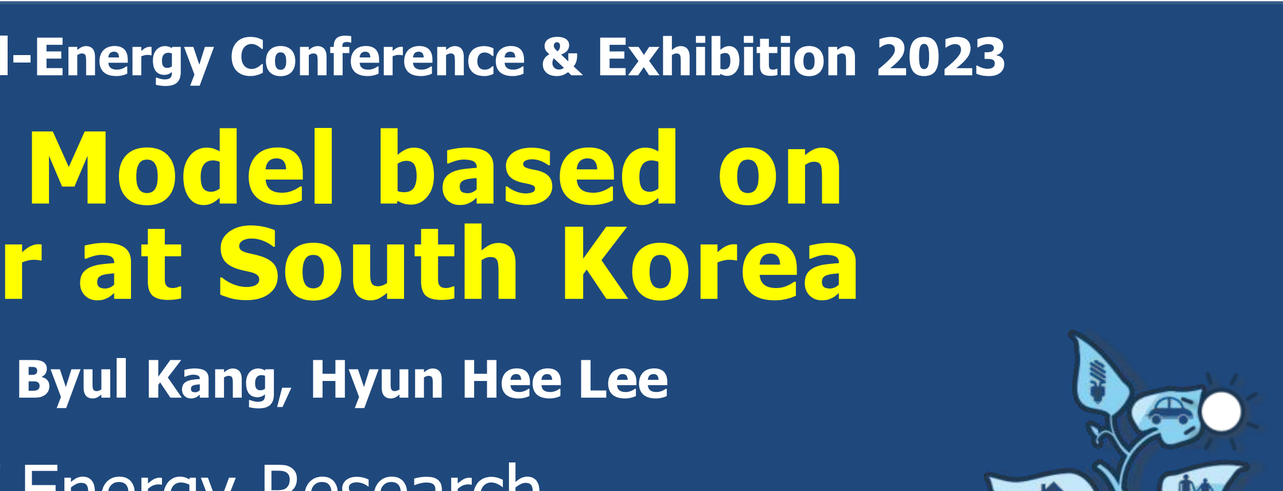
❖ Substation

- Control and Predict 4GDH Demand
- Control DH Water Temperature and Amount from New and Renewable Energy and 3GDH
- Using ORC Power Generator and Adsorption Chiller, Control DH water Temp.



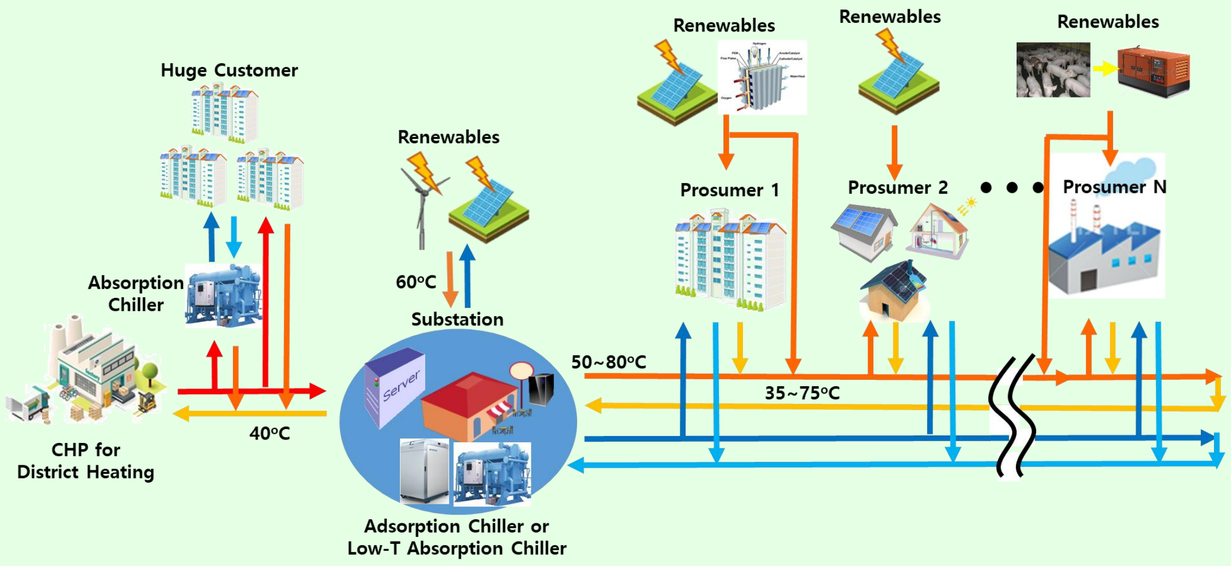
Substation Position and Function

❖ 4GDH Model



Two-Line LTDH

One-Line LTDH



LTDHC Concept

- By controlling amount of compensation, Prosumer can consume Energy himself or sell to DH Company
- By considering pumping power, DH water line connection, One-line DH or Two-line DH system can be chosen
- Low Themperature District Heating and Cooling can be designed connected to 3GDH. Absorption Chiller can make good role in this concept.