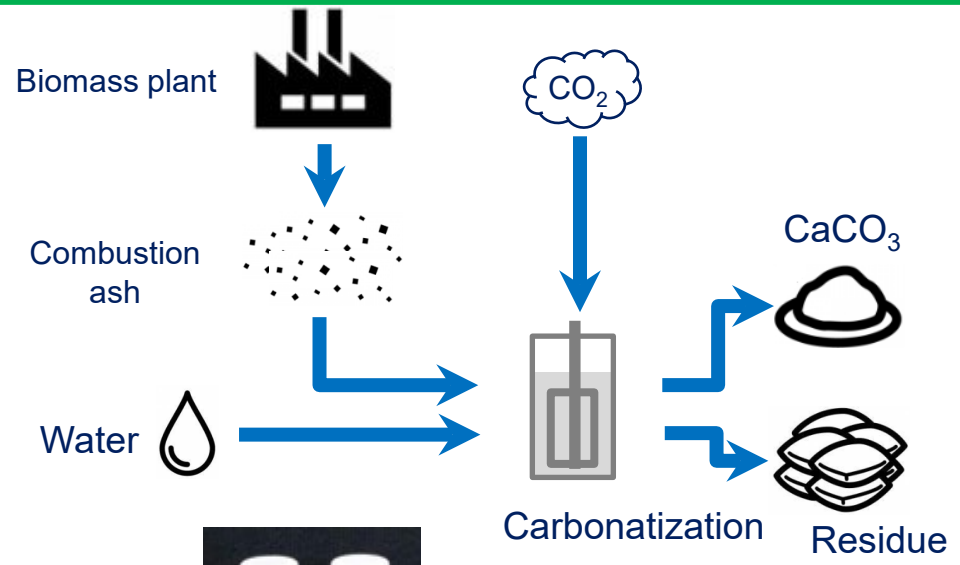
Carbonation using biomass ash

R&D | FS/Demo | Product/ Service

Technology Research Center

- Biomass boilers utilize carbon-neutral biomass fuels, but they generate a large amount of combustion ash.
- The treatment of this ash has become a major challenge, and both volume reduction and effective utilization are required.
- Biomass ash is known to contain a high amount of calcium (Ca), and our technology aims to reduce the volume of boiler ash by reacting the Ca in the ash with CO_2 contained in power-plant exhaust gas and recovering it in the form of calcium carbonate ($CaCO_3$).
- The calcium carbonate obtained through this process has high purity and fine particle size, making it suitable for application to high-value-added products.
- By effectively utilizing biomass ash, which was previously treated as waste, this technology contributes to resource circulation.



Left: Combustion ash
Right: $CaCO_3$ generated

Carbon Neutral Contribution points

✓ Utilizing combustion ash derived from carbon-neutral biomass fuels and CO_2 contained in exhaust gas, this technology aims to achieve resource circulation.

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