Thermal storage of renewable energy and its integration in a hybrid microgrid, with power-to-heat flexibility services that can be provided to the electric grid

THE NEED. Renewable energy is not always available when needed and, just as often, when energy is available the quantities produced amount to more than is required.

THE SOLUTION. Ecovat is a thermal, seasonal storage system that enables heat storage of up to 90°C with minimal energy and exergy loss. Over a period of >6 months, less than 10% energy is lost, exergy losses are less than 7%. Ecovat's storage system is designed for net balancing with power-to-heat and integration in a hybrid smart microgrid.

KEY FEATURES.
- High temperature, over the season, district use (500-1500 houses).

VALUE PROPOSITION.
- Construction costs are substantially lower than comparable systems.
- Ecovat is the first storage system that can store up to 90°C and retrieve the energy after a long period with less than 10% loss.
- A steering system enables power system balancing and flexible utilisation of energy markets.