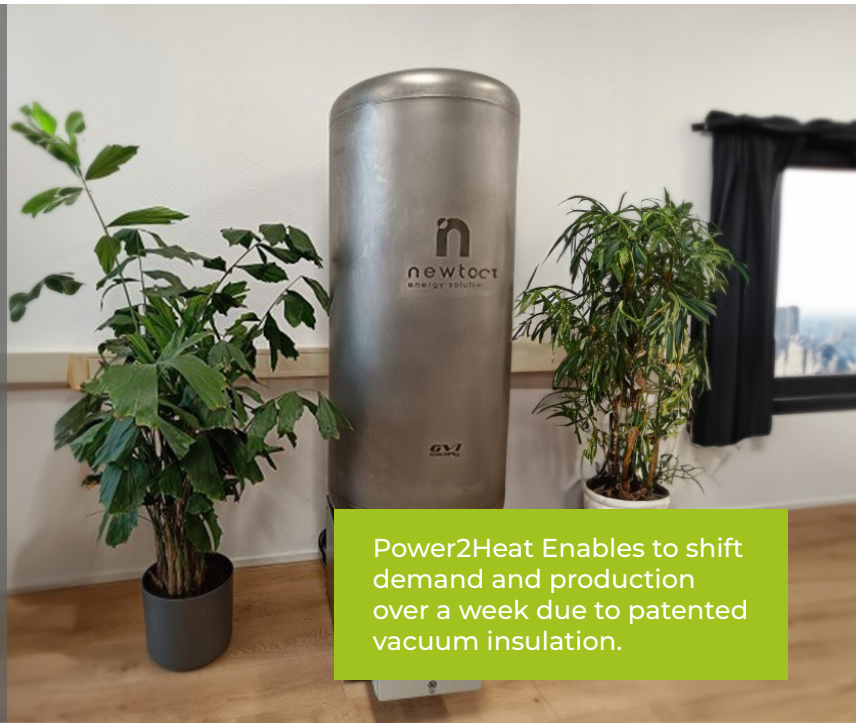
Luxxor Newton NEStore

Warm water heat battery

The NEStore water-based heat storage revolutionize hot water management. It increases self-consumption of solar electricity by storing excess solar energy as heat for later use. This reduces the load on the electricity grid. Our innovative design eliminates thermal bridges and with a cutting-edge patented vacuum insulation technology the NEStore is an almost energy loss-free hot water battery



Power2Heat Enables to shift demand and production over a week due to patented vacuum insulation.

Innovation

Thanks to our innovative thermal tank design and patented vacuum insulation, the NEStore can store hot water reaching temperatures up to 110°C.

Is this a product for you?

This is a product for everyone who has a hot water demand and is thinking about (electrically) storage in for example care centers, sport complexes, apartments but also heat grids, concept designers, installers, homeowners, and housing associations.

Results of the product

- With ultra-low heat loss of approximately 1% (or just 15W), the NEStore ensures your heat is stored profitably for weeks
- The ability to store hot water at higher temperatures effectively multiplies the NEStore's capacity by 6 to 8 times compared to traditional hot water tanks

Advantages

- Boosts the share of sustainable energy from 20% to 90%
- Space-saving design
- Maximizes savings with flexible rates
- Reduces strain on the power grid during peak demand periods, both in summer and winter
- Lowers energy bills

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Integration

The NEStore hot water battery is easily installed in two parts: a vessel and a bottom compartment:

- The cold domestic water or central heating water is heated with a plate heat exchanger
- Charging connection: 230V AC

	NEStore E20	NEStore E30
Volume	200L	300L
Capacity	20kWh	30kWh
Dimensions (LxWxH) [cm]	60x60x165	60x60x205
Empty weight [kg]	149	190
Charging power	3,4kW	3,4kW

The importance of storage

Hot water represents a significant and increasing portion of heat demand, often exceeding 50% in new construction projects. This demand persists year-round, requiring temperatures of 55-60°C (potentially higher in utility depending on configuration) and high-power output (typically 15-20kW, with large showers reaching up to 40kW).

These high temperatures and power requirements pose challenges for many heat pumps. Hot water buffers offer multiple advantages to optimize hot water systems:

- Hot water buffers act as a thermal bank, allowing you to use smaller, lower-cost heat pumps that meet the demand. This minimizes grid connection capacity needed for peak usage.
- Buffers help manage the summer peak of solar power generation. Excess electricity can be used to heat water, reducing reliance on the grid
- Buffers increase year-round self-consumption of solar energy by using excess electricity for hot water heating when solar production is high.
- Buffers enable strategic hot water heating to occur when sustainable energy costs are low. This maximizes cost savings for the homeowner
- Buffers reduce peaks by distributing demand over a longer timeframe. This eases pressure on the grid during peak hours.

New

Luxxor hot water storage – layered for sustainability

The product group ‘hot water storage’ includes two product-series.

Thermocline - Layered heat

- High quality storage tank
- Increased heat pump performance (by 9 to 25%), due to improved layering with the patented stratifier
- Reduced heat losses due to a single passage

NESstore – Heat Battery

- Stores thermal energy like a home battery, but for heat.
- Holds 6 to 8 times more heat than traditional storage tanks
- Near zero heat loss to the environment because of the patented vacuum insolation
- Week-Long Shift: Store excess heat and use it for hot water needs over a week.

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sustainable energy systems