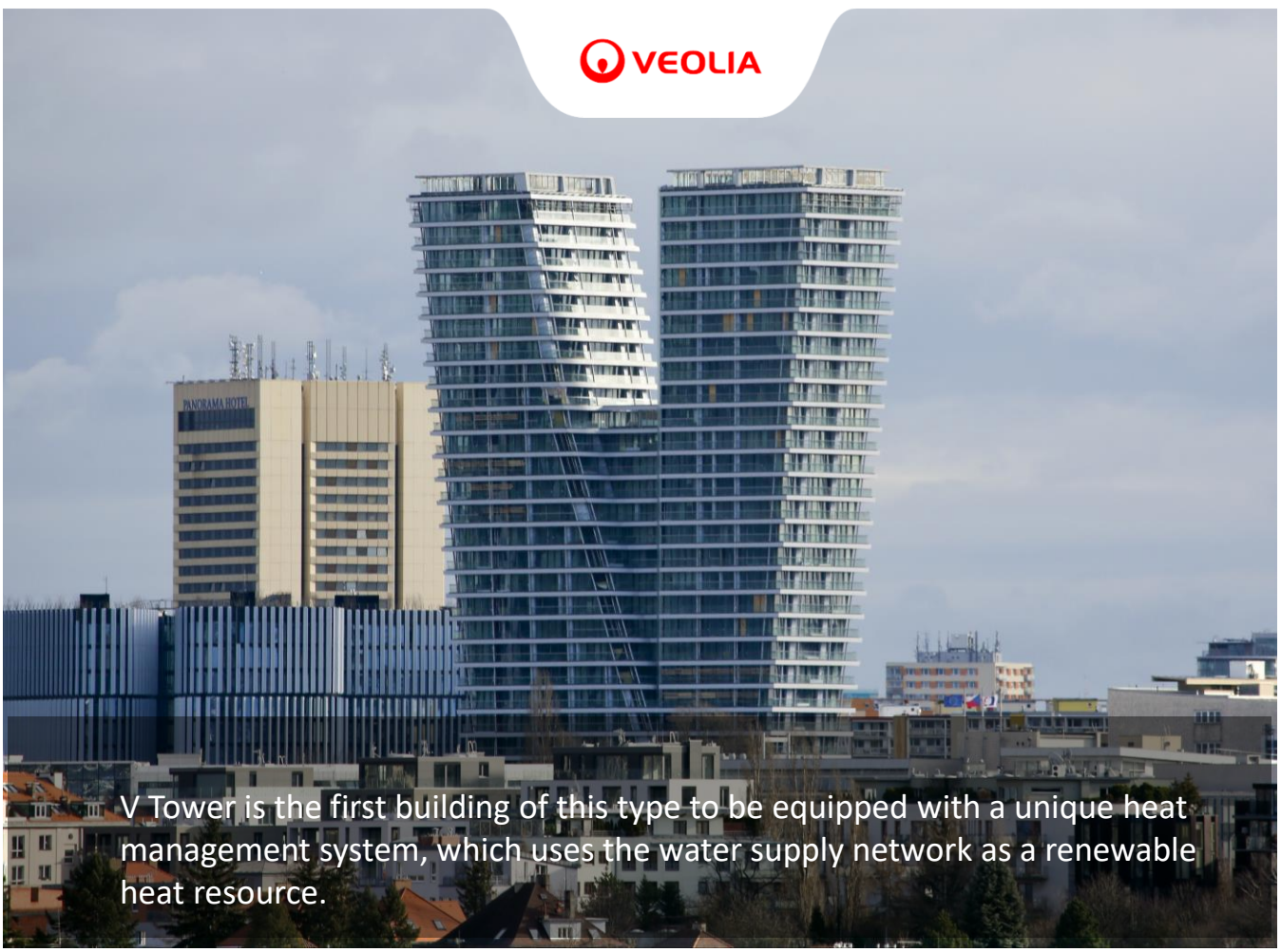
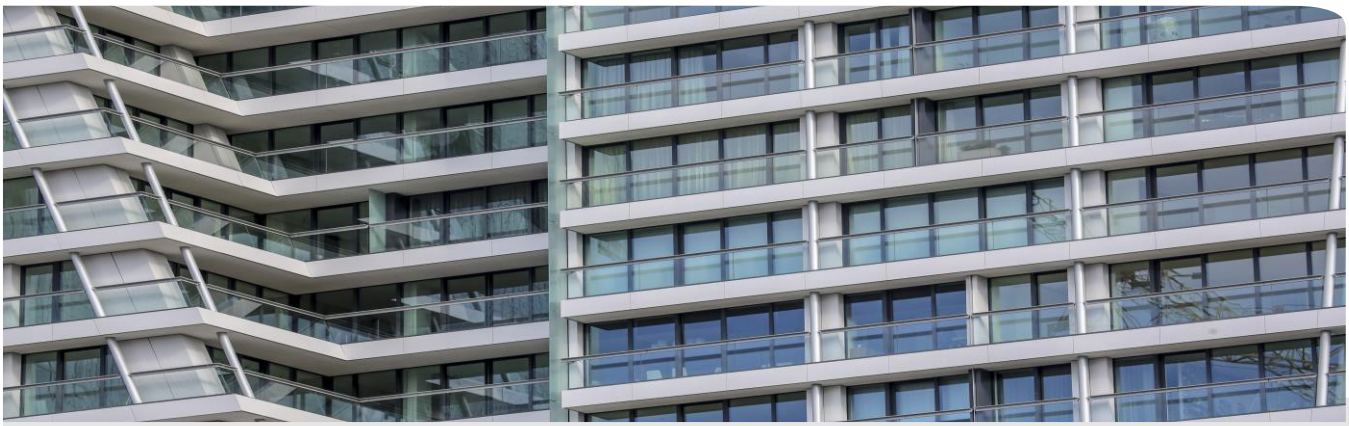
# Environmentally sound, cost-effective and innovative energy solution




V Tower is the first building of this type to be equipped with a unique heat management system, which uses the water supply network as a renewable heat resource.



V - T O W E R

**Eco-friendly and innovative**

---

**75%**

coverage of heat consumption in the building

---

**30%**

savings compared to gas boiler rooms

---

**circulation-free design**

of hot water distribution

---

**inserted circuit with a heat exchanger**

to ensure full safety

## *Challange*

- V-Tower is a premium apartment complex located in Prague's Pankrác district. This thirty-storey apartment building with 130 apartments was designed by leading Czech architect Radan Hubička and the development company PSJ INVEST, a.s. took care of the implementation.
- During the construction of the V-Tower, great emphasis was placed on the environment, comfort and operational efficiency. Veolia's task was to find a way of heating that would be not only economical, but above all ecological. The contracting authority's environmental vision was very high.

## *Solution*

- Considering its location, the use of a heat pump was one of the few feasible options. Standard solutions were not suitable, however, for multiple reasons. A ground-to-water heat pump would be highly expensive. The air-to-water solution is unsuitable for low efficiency, high bivalence, dependence on unstable environments, noise levels that conflict with hygienic limits, and large evaporators are problematic for the appearance of the building.
- Veolia came up with a globally unique heat pump solution using the low-potential heat of the drinking water in the main pipe. Combining water and energy management, it obtained a highly stable heat source.
- The source is renewable and its operating costs are minimal. Throughout the year, the water has a constant temperature of 6 to 11 °C and the heat pump, which is connected to the supply line, has in this case a continuous source of low-potential heat and up to twice as efficient as in the classic variant. The capacity of the heat pump covers the basic requirements of the building for heating and hot water throughout the year. Peak time heating supply is covered by heat provided from a district heating network. The equipment is also used for cooling.

## *Result*

- Previously, similar systems were used in water tanks, but no one has yet applied them to water pipes. This solution is not only unique, but also economical, as it allows 75% of the heating needs of the V-Tower to be met and the heat obtained is 30% cheaper than the heat from gas boilers. V-Tower is the first residential project in Europe with LEED PLATINUM certification, which has the strictest requirements for environmental friendliness, living comfort and efficiency of building operation.