

SEMIZENTRAL

Water & Energy Sufficiency in Infrastructure Development

Water Reuse within "Semizentral"

Wastewater contains a valuable resource in concentrations of more than 99.5 % – water. Thus, water reuse is an essential component of integrated water resource management, not only in arid and in water deficient areas, but increasingly also in densely populated urban areas, where water demand and supply diverge widely.

Intra-urban reuse of water for utilizations which do not require drinking water quality offers a high potential to save valuable water resources and reduce wastewater discharge. However, water reuse requires the transition from conventional, centralized to nodal, semi-centralized supply and treatment systems with short distances from the firsthand user to the treatment units and back to the secondhand reuse. By reusing adequately treated water, the demand of potable water could be reduced by 30 %. Additionally, the amount of wastewater to be discharged can decrease by the same proportion.

Intra-urban water reuse not only preserves valuable water resources and is more cost-effective but – in combination with biogas recovery – is also more energy-efficient.

