

Wastewater Treatment and the Water Energy Nexus

By Mark Hardiman, CEO LAT Water



LAT WATER

The Water Energy Nexus

The water-energy nexus is the relationship between the water used for energy production, and the energy consumed to extract, purify, deliver, treat and dispose of water/wastewater.



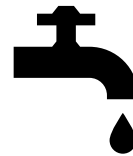
LAT WATER



By 2050 energy use is expected to increase by 80%, water use will increase by 55%



Globally 80% of wastewater is not adequately treated



Water treatment accounts for 3-4% of global energy use



Energy decarbonisation increases water demand, forecast to increase at 1.8%

<https://iwa-network.org/learn/circular-economy-tapping-the-power-of-wastewater/#:~:text=Description,3%25%20of%20global%20energy%20output>

<https://www.ren21.net/renewable-energy-water-energy-nexus/>



The Demand for Wastewater Treatment

Increased Pollution – Toxic levels of heavy metals found in 3 out of 4 of India's rivers

Sustainable & reliable source of clean water – Reduce water treatment costs

Increased resilience against external forces – Energy price spikes, water shortages, climate impact

Pressure on water infrastructure – India is the 13th most water stressed country

<https://www.telegraph.co.uk/global-health/climate-and-people/indias-polluted-rivers/#:~:text=In%20June%202022%2C%20a%20study,117%20of%20India's%20major%20rivers.>

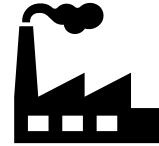
<https://aquaporin.com/india-industry-solve-water-pollution/>



Wastewater Treatment in India



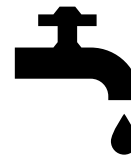
LAT WATER



Current infrastructure covers only 27 % of water demands



Continued economic growth will lead to increased water and energy demands



62% of wastewater in urban India untreated or partially treated

<https://www.indiawaterportal.org/articles/wastewater-management-framework-india-policy-challenges-and-solutions-sustainable-future>

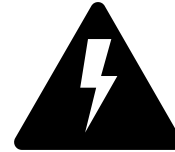
<https://www.weforum.org/agenda/2019/10/water-pollution-in-india-data-tech-solution/>

Wastewater Treatment

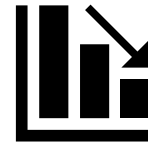
The Limitations of Existing Technology



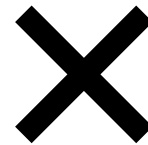
LAT WATER



High Energy Demand



Low performance



Inflexible



High Maintenance Costs / Poor Reliability

LAT Water

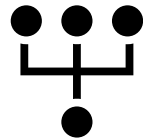
Water Treatment That Won't Cost The Earth



LAT Water's mission is to tackle the rising environmental impact of industrial wastewater treatment. We have developed unique solutions to water treatment **using waste heat as a free energy source.**



Use Waste Heat to Lower Operating Costs



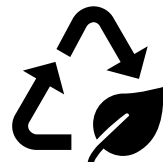
Flexible



High Water Recovery



Reliable, Low Maintenance



Sustainable Solution

LAT Water

Solutions For A Wide Range of Industries



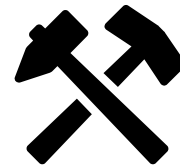
LAT WATER



Agriculture & Anaerobic Digestion



Food & Drink



Metals & Mining



Waste Management



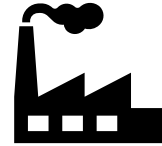
Chemicals & Pharmaceuticals

LAT Water

Opportunity in India



LAT WATER



Local manufacturing & ongoing support



Technology Transfer



Distribution & Partnerships



LAT WATER

Contact

Mark Hardiman, CEO, LAT Water Ltd

E : Mhardiman@latwater.com

T : 0044 7899 016114

W: www.latwater.com

Unit 1, Rivermead Business Park

Pipers Way,

Thatcham RG19 4EP

UK