Ekster & Associates, Inc.
Machine Learning (ML) Based Control Systems

Lower electricity costs at your treatment plant, with the equipment you already own

October 2026

The issue.

Blowers, which supply air to the tanks where bacteria clean the water, are the largest single users of electricity at most wastewater treatment plants. Most plants supply more air than the process needs, as a safety margin.

The solution.

Ekster & Associates' machine-learning based control systems supply only the air the process needs, minute by minute, using the plant's existing blowers and plant control system. Operators can override the system at any time, and faulty instrument readings are not acted on.

Plant	Result
Pomona Water Reclamation Plant, Los Angeles County Sanitation Districts	New blowers first reduced blower energy by 34%; DO/Nmaster and SRTmaster then saved a further 30%. Aeration energy fell from 1,300 to 550 kWh per million gallons (U.S. Department of Energy final report). 2025 CASA Excellence in Innovation and Resiliency Award (awarded to the Sanitation Districts and Carollo Engineers)
City of Chico, California	2018 control project built around DO/Nmaster: 47.6% less aeration energy per pound of oxygen demand, with the existing blowers; 1,198,692 kWh and $168,051 a year (2018 rates), verified under a PG&E program; PG&E incentive $121,208

Who uses it.

Los Angeles County Sanitation Districts (Pomona Water Reclamation Plant; BLANKETmaster under contract since October 2026); City of Chico, California, since 2014; under contract: Metro Water Recovery, Denver (200+ million gallons per day). The Chico project received the 2020 Water & Wastes Digest Top Project of the Year award for Automatic Ammonia Control.

What it involves.

No new blowers, and no capital project for the control system. Ekster & Associates sells no hardware; any additional instruments are bought from any supplier to Ekster & Associates' recommended performance specifications. Operators stay in charge: they can override the system at any time, and faulty instrument readings are not acted on.

Next step.

A free plant assessment: send one year of operating data and energy bills, and receive a written estimate of savings in kWh and dollars, the assumptions behind it, and a fixed price. If your plant is already operating efficiently, the estimate will say so.

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