INDUSTRY LEAVE-BEHIND · COGENERATION & COMBINED HEAT AND POWER (CHP)

Why Your Cogeneration Plant Pays More for Water Than It Should — and How to Fix It

Water Flow Innovations LLC
Flow Conditioning Device (FCD)
waterflowinnovations.com

Your cooling towers, boiler and HRSG makeup, and chilled water systems all draw from the same supply — but your meter counts more than arrives. **Tower makeup valves, demineralizer regenerations, and boiler makeup create sudden demand surges at your meter: pressure inside it drops, dissolved gas comes out of solution and vapor forms, and you're billed for that volume as water.** *The FCD (Flow Conditioning Device) corrects the measurement. Your cycle chemistry and plant operations see no practical change. Your water bill drops — and so does your sewer bill, because sewer charges are calculated from the same inflated meter reading. One device. Two bills fixed.*

WHY COGENERATION PLANT WATER METERS OVER-READ

The Core Problem Is at the Meter: The FCD Corrects the Reading Ahead of Every Plant Water System

Pretreatment, demineralization, tower treatment, and boiler feedwater conditioning all sit downstream of the utility meter. The FCD installs immediately after the utility meter, before water reaches any plant system, correcting the recorded intake without changing makeup quality or cycle chemistry. Only billing accuracy changes.

THE THREE OVER-READING SOURCES UNIQUE TO COGENERATION PLANTS

Cooling Tower Makeup

Usually the largest water use on site. Makeup valves cycle with load and weather, creating sudden demand surges that drop pressure inside the meter, so gas and vapor form and are counted as water.

Boiler & HRSG Makeup

Steam and condensate losses are replaced through pretreatment and demineralizer trains. Train starts and regenerations create sharp demand surges at the meter on every cycle.

Chilled Water & Thermal Storage

Absorption and electric chiller plants, thermal storage tank fills, and campus loop makeup add variable demand — compounding tower and boiler over-reading through every operating day.

Your Sewer Bill and Water Reporting Start With the Meter

Most tower makeup evaporates, yet sewer is often billed from metered intake; evaporation credits remove vapor loss, but an over-reading meter still inflates what remains. Plant water intensity (gallons per MWh) and campus or corporate sustainability reports also reference metered intake. After FCD installation, metered intake reflects true use.

BEFORE & AFTER THE FCD

WITHOUT FCD

- × Gas and vapor counted as water volume
- × Tower makeup surges inflate the meter daily
- × Demin and boiler makeup compound over-reading
- × Water intensity reports overstate intake
- × Sewer charge tied to inflated meter

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WITH FCD INSTALLED

- ✓ Metered volume reflects water actually delivered
- ✓ Tower makeup reads accurately
- ✓ Demin and boiler makeup measured correctly
- ✓ Water intensity reports reflect true use
- ✓ Sewer charge based on real usage

Up to 30%	<0.8 psi	Custom	Lifetime
Savings on monthly water & sewer bills	Pressure loss across all flow conditions	Built for each site, including large mains	Manufacturer's warranty

How the FCD Works — Four Steps

1. Installs immediately after your water meter, ahead of the PRV, during a planned outage
2. Creates a small, controlled back-pressure that extends back through the meter
3. Holds pressure up through the meter during demand surges, so far less gas and vapor form
4. Meter records closer to the water delivered. Bill drops. Makeup quality, cycle chemistry, and plant operations see no practical change.

FREE SAVINGS ESTIMATE

Models your building's 24-hour flow profile. No contact info required.
waterflowinnovations.com/water-bill-savings-calculator

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CERTIFICATIONS

IAPMO · NSF/ANSI/CAN 61 · KIWA · GMP · SQF

Patented (AquaFlow Technologies, Inc.)
316L Stainless Steel · Made in USA
Under 0.8 psi pressure loss
Save up to 30% on monthly water and sewer bills