

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

Your reaction cooling, scrubbers, and cooling towers all draw from the same supply — but your meter counts more than arrives. **Process cooling water cycling, scrubber demand, and cooling tower makeup create the conditions for air, gas, and turbulence to form in the line at your meter — and you're billed for it.** The FCD (Flow Conditioning Device) corrects the measurement. Process chemistry and every safety control stay the same. 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 CHEMICAL MANUFACTURING FACILITIES WATER METERS OVER-READ

The Core Problem: Chemical Plants Run Three Simultaneous High-Velocity Water Demand Sources All on One Municipal Meter

Process cooling, wet scrubbers, and cooling towers each generate their own high-velocity demand events — and all three draw from the same municipal supply meter simultaneously. Each event generates air, gas, and turbulence in the line at the meter. The FCD installs immediately after the municipal meter ahead of all three systems and corrects the combined over-reading without changing any process chemistry, reaction parameter, or environmental control.

THE THREE OVER-READING SOURCES UNIQUE TO CHEMICAL MANUFACTURING FACILITIES



Process Cooling Water Cycling

Reactor and heat exchanger cooling water cycling with production load creates high-velocity variable demand — generating air, gas, and turbulence at the supply meter on every cooling cycle throughout every production shift.



Wet Scrubber Water Demand

Wet exhaust and emissions scrubber water demand cycling with production throughput creates continuous demand events — compounding process cooling over-reading throughout every operating hour.



Cooling Tower Makeup

Large cooling tower arrays cycling with aggregate plant heat load create sustained variable demand — adding a third compounding over-reading source on top of process cooling and scrubber demand every billing cycle.



Your NPDES Water Balance & ISO 14001 Water Intensity Data Is Better Than Your Meter Shows

Chemical plants reference metered intake for NPDES water balance filings, TSCA facility reporting, and ISO 14001 water intensity disclosures. When the meter over-reads, every filing overstates intake. After FCD installation, metered intake more accurately reflects actual use — improving the accuracy of NPDES, Responsible Care water stewardship metrics, and customer ESG scorecards.

BEFORE & AFTER THE FCD

WITHOUT FCD

- ✗ Air, gas & turbulence billed as water volume
- ✗ Process cooling inflates meter each shift
- ✗ Scrubber demand compounds over-reading
- ✗ NPDES water balance overstates intake
- ✗ Sewer charge tied to inflated meter



WITH FCD INSTALLED

- ✓ Metered volume reflects water actually delivered
- ✓ Process cooling reads accurately
- ✓ Scrubber demand measured correctly
- ✓ NPDES water balance closes accurately
- ✓ Sewer charge based on real usage

5–30%

Average water & sewer bill reduction

46%

Highest documented single-site reduction

~1 Hour

Install time — water off about 1 hour

6-Mo

Money-back, no questions asked · install non-refundable

How the FCD Works — Four Steps

1

Installs between two pipe joints right after your water meter — water off about one hour

2

Creates a slight back-pressure that extends back through the meter, reducing air, gas, and turbulence

3

Delivers a laminar-like flow profile through the meter — the condition it was calibrated to read

4

Meter reads accurately. Bill drops. Every process chemistry parameter, reaction control, and environmental permit requirement is effectively unchanged.

FREE SAVINGS ESTIMATE

Instant estimate — takes 30 seconds, no contact info required.

waterflowinnovations.com/water-bill-savings-calculator

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CERTIFICATIONS

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