



A 1400-Foot Retrofit Success:

Stratford's Clean-Water Pump Gets a SmartD Upgrade

Eliminating filters, faults, and wasted energy in a long-cable retrofit

- **Location:** City of Stratford, ON
- **Application:** Clean water pump station
- **Challenge:** 1362ft of degraded and buried cable between drive and motor.



The Challenge

- Previous VFD (ABB) installation repeatedly faulted due to dv/dt and reflected waves.
- Cable replacement is impossible (buried, high cost).

The Objective

- Achieve variable-speed control and improve energy efficiency without modifying the existing infrastructure..

SmartD Solution

- Installed a Clean Power VFD (filterless, sine-wave output).
- Standard cable, standard motor, no additional hardware.
- The drive now runs reliably at 48 Hz to maintain desired flow and pressure.

"It's quiet, balanced, and works perfectly. We didn't have to change anything."



Scan the QR code to learn more how **SmartD Technologies** revolutionize motor control

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Results

- 40% energy savings (due to reduced frequency and eliminated throttling).
- Zero faults or noise.
- No harmonic hum.
- No infrastructure change required.
- Maintenance quote:

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Why It Matters

- Demonstrates SmartD's capability for long-cable retrofits and pump optimization without filters.
- Simplifies upgrade paths for municipalities and utilities where buried infrastructure prevents replacement.
- Reinforces cost-saving and reliability gains with zero-risk deployment.

Technical Highlights

- 1500-ft cable length supported.
- Pure sine-wave output, THDi < 5%.
- No dv/dt, no common-mode voltage.
- Motor runs cooler and quieter.

40%+

Energy Savings

0

Downtime

1,362ft

Long cable



About SmartD

SmartD Technologies' Clean Power VFD controls motor speed and reduces stress by delivering clean sine-wave signals instead of traditional "on-off" pulses. This technology integrates filtering directly into the drive using Silicon Carbide (SiC) MOSFETs, eliminating the need for external components. The result is a simpler installation that enhances durability and extends the life of the motor and its bearings.



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