

# *Water Wastewater Services*

**Power Distribution, Automation & Control**



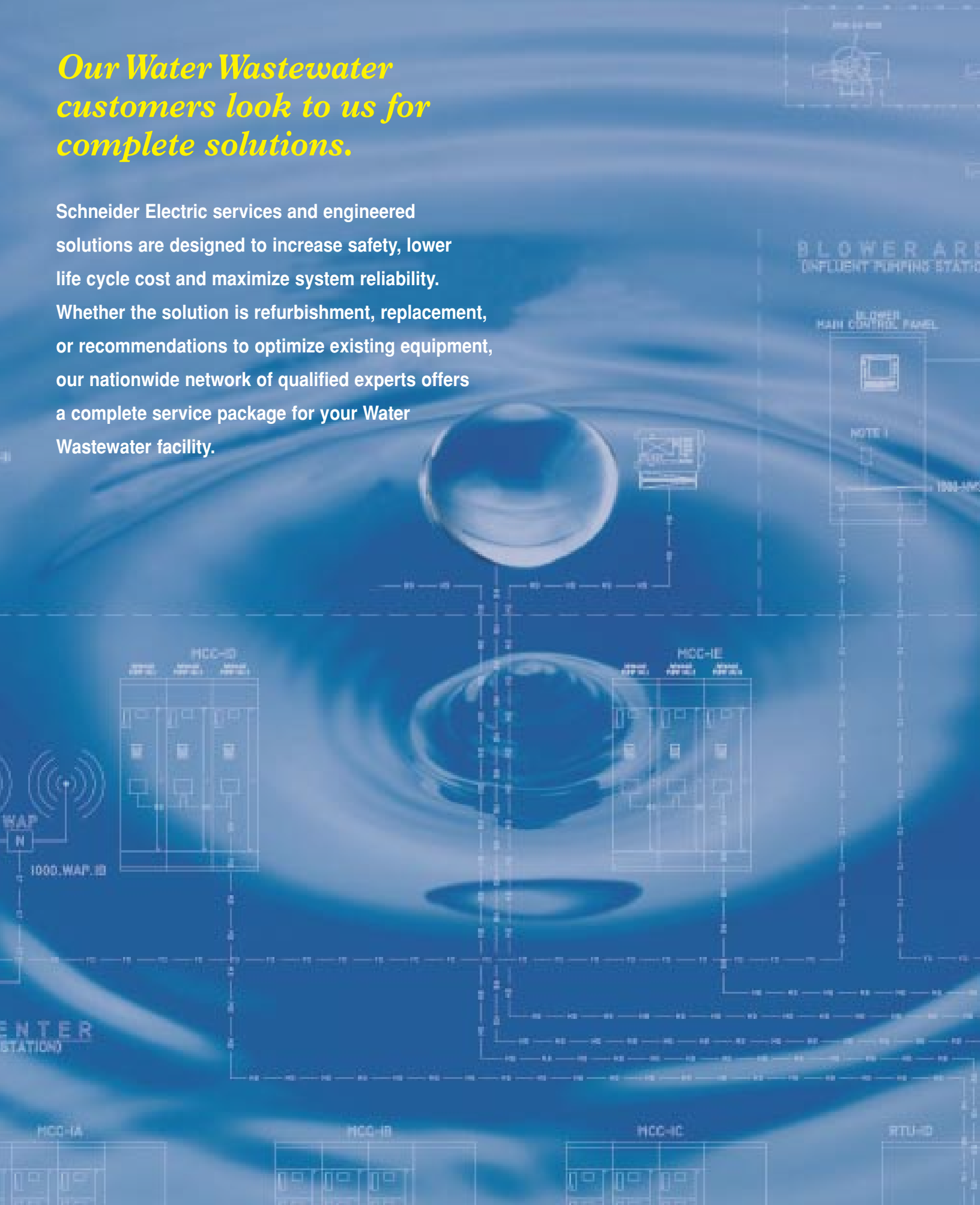
Merlin Gerin  
Square D  
Telemecanique

**Schneider**  
 **Electric**  
*Building a New Electric World*

# *Our Water Wastewater customers look to us for complete solutions.*

Schneider Electric services and engineered solutions are designed to increase safety, lower life cycle cost and maximize system reliability.

Whether the solution is refurbishment, replacement, or recommendations to optimize existing equipment, our nationwide network of qualified experts offers a complete service package for your Water Wastewater facility.



## *What Are Square D® and Automation/Control Services from Schneider Electric?*

Service solutions across the full range of power, automation and control. Services to help you optimize and extend the life of your equipment. Services that help you reduce costs and downtime. Services to help you promote a safer work environment through newly pioneered technology that helps mitigate the risk of dangerous arc flash events in both low and medium voltage applications. Emergency and disaster recovery services, including diagnostics and event reconstruction to get at root causes and prevent recurrences. Certified experts to complement your in-house capabilities or add support. If fixing your problem means repairing another manufacturer's equipment, we'll do that too—expertly.

At Schneider Electric, service isn't a support organization: it's a core business with its own sales, marketing, engineering and operations divisions. We have a dedicated organization of factory trained technicians, industry recognized engineers, expert power consultants and MRO specialists. Our nationwide team of more than 300 field technicians in over 20 service locations provides customers of all sizes with industry-leading support and services. Our dedicated service department provides premier power and automation solutions—including online service packages.

With Square D and Telemecanique, you can be assured that your Water Wastewater facility will receive highly specialized service implemented at the highest standards—and technical and engineering resources that are literally unmatched in the industry.

To find out how Schneider Electric Services can help you, visit us at [www.us.SquareD.com](http://www.us.SquareD.com) or call 1-888-SQUARED today.



*Services available  
24/7, 365 days a year.*

## *Why Does Your Facility Need Schneider Electric Services?*

### **Upgrade. Retrofit. Expand.**

With many water and wastewater facilities in North America reaching an advanced age, municipalities are faced with a difficult and costly challenge: keep these facilities operating, prepare for future demands, upgrade to meet increasingly rigid government standards and do it all in the face of tighter budgets and smaller staffs.

### **Optimize Equipment**

Fortunately, the Square D and Telemecanique retrofit and upgrade programs for water and wastewater facilities directly address these challenges. We optimize and extend the life of your equipment, sharply reduce downtime, minimize costs and promote a safer workplace by installing and supporting the latest in power and control technology within your existing framework—at a fraction of the cost of new.

### **Strategic Assessments**

Our industry experts, supporting or augmenting your staff, assess your facility and show you how to strategically and cost-effectively retrofit and upgrade your infrastructure, comply with emerging industry best practices and meet new regulatory requirements.

For example, our power system assessment focuses on the condition of your electrical system; provides recommendations and priorities for improvements in reliability, availability and safety; and generates essential documentation of system configurations, condition and maintenance requirements.





## **A Flexible Approach**

Our systematic approach to upgrades and retrofits is the key to extending the life of equipment at a fraction of the cost of replacement. We upgrade or replace circuit breakers with new technology; develop switchgear retrofit solutions; recondition LV and MV power circuit breakers; replace or repair drives; convert MV motor-starter circuit breakers to reliable, heavy-duty fused vacuum contactors and more.

We conduct power quality and harmonic studies identifying previously undiagnosed problems that can reduce equipment life and interfere with reliable operation. As the upgrades come online, our installation services verify that the new equipment is damage-free, properly installed, and ready to meet optimum performance standards.

Our automation specialists identify upgrade paths that minimize the cost of the upgrade and let you upgrade on your own schedule. We support Modicon<sup>®</sup>, SY/MAX<sup>®</sup> and Telemecanique<sup>®</sup> legacy systems with a complete parts and inventory system that keeps aging controllers operating efficiently. They can help determine whether your existing PLC system can handle added I/O, and migrate existing Modicon and SY/MAX controllers to the latest technologies.

## **Emergency Repair Services**

Our emergency repair services are available on and off site—with a guaranteed 24-hour response, 7 days a week...with even faster guaranteed response times available. We can provide a complete range of service capabilities across all engineering competencies, including custom engineering, upgrades, retrofits and repairs, start-up, restoration and rebuild, NFPA 70E<sup>®</sup> safety compliance and more.

## Water Wastewater Services Solutions

Our nationwide team is ready to supply complete solutions in electrical distribution, automation and control or engineering services.



### Electrical Distribution

<b>Equipment Startup and Commissioning</b>	<b>Trust the experts with your new investment</b> <ul style="list-style-type: none"> <li>• Correct any shipping damage</li> <li>• Ensure proper installation</li> <li>• Maximize equipment longevity</li> <li>• Verify functionality to specifications</li> <li>• Provide baseline to establish a maintenance program</li> <li>• Setup of all adjustable devices</li> </ul>
<b>Direct Replacement Circuit Breakers</b>	<b>Upgrade to new technology</b> <ul style="list-style-type: none"> <li>• Increase performance using new breakers</li> <li>• Minimize downtime</li> <li>• Reduce project costs</li> <li>• Available for most manufacturer's switchgear</li> </ul>
<b>Retro-Fill Circuit Breakers</b>	<b>Extend the life of your equipment</b> <ul style="list-style-type: none"> <li>• Increase performance with new breakers and cradles</li> <li>• Reuse existing switchgear cubicle</li> <li>• Minimize downtime</li> <li>• Reduce project costs</li> <li>• Available for most manufacturer's switchgear</li> </ul>
<b>Equipment and Safety Training</b>	<b>No one knows more</b> <ul style="list-style-type: none"> <li>• Operational and maintenance training</li> <li>• Customized for equipment on site</li> <li>• Includes classroom and hands-on training</li> <li>• NFPA 70E training workshop</li> </ul>
<b>Preventative Maintenance and Testing</b>	<b>Protection before problems start</b> <ul style="list-style-type: none"> <li>• Cable testing</li> <li>• Relay/meter calibration</li> <li>• Custom service agreements</li> <li>• Infrared testing</li> <li>• Also available for non-Square D equipment</li> </ul>
<b>Breaker Reconditioning</b>	<b>Peace of mind for older equipment</b> <ul style="list-style-type: none"> <li>• Check, clean, correct, calibrate and certify old breakers</li> <li>• Complete breaker overhaul</li> </ul>

To learn more, call 1-888-SQUARED and ask for your local service sales representative or visit us online at [www.us.SquareD.com](http://www.us.SquareD.com).

## Automation & Control

<b>Electronics Repair</b>	<p><b>Repair, don't replace</b></p> <ul style="list-style-type: none"> <li>• Offered for Schneider Electric products and all other major industrial electronics manufacturers</li> <li>• Up-to-date repair database that tracks common problems and steps to repair allows quick turnaround</li> <li>• Testing included to verify performance</li> <li>• Thousands of certified remanufactured products available for immediate turnaround</li> <li>• Relationships with many sources to quickly locate a solution</li> </ul>
<b>Network Services</b>	<p><b>Make communication more robust</b></p> <ul style="list-style-type: none"> <li>• System design expertise on network redundancy, security, and protocols</li> <li>• Field diagnostic and repair capabilities to speed communication failure recovery efforts</li> <li>• Expert training of personnel to sharpen troubleshooting skills</li> </ul>
<b>Legacy PLC Upgrade</b>	<p><b>Upgrade to new technology</b></p> <ul style="list-style-type: none"> <li>• At PLC end of life, an orderly transition will reduce problems with either repair, exchange, or upgrade</li> <li>• Rack adapters minimize cabinet mounting and configuration changes</li> <li>• I/O connector converters eliminate rewiring of field devices</li> <li>• Software converters minimize code rewrites to speed integration and startup</li> <li>• Network adapters allow blending of the old and new systems, allowing "incremental migration" to help manage costs and risks</li> </ul>
<b>Legacy Drives Upgrade</b>	<p><b>Upgrade to new technology</b></p> <ul style="list-style-type: none"> <li>• Extend equipment life and minimize downtime with replacement drive solutions</li> <li>• Parameter conversion utilities to simplify startup</li> <li>• Pre-built subpanel assemblies to speed installation</li> <li>• Control wiring conversion to minimize field rewiring</li> <li>• Turnkey drive panels and increase installation efficiency</li> </ul>

## Engineering Services

<b>Power System Assessment</b>	<p><b>Give your system a thorough checkup</b></p> <ul style="list-style-type: none"> <li>• Evaluate the condition of the electrical system to allow prioritization of system improvements</li> <li>• Improve reliability and enhances electrical safety</li> <li>• Provide essential power system documentation</li> <li>• Ensure proper operation of new or modified loads</li> </ul>
<b>Power Quality Studies</b>	<p><b>Clean up your power</b></p> <ul style="list-style-type: none"> <li>• Analyze power system disturbances and interruptions</li> <li>• Reduce cost effect of poor power quality</li> <li>• Troubleshoot power system problems</li> <li>• Recommend corrections</li> </ul>
<b>Harmonic Studies</b>	<p><b>Harmonics can be costly</b></p> <ul style="list-style-type: none"> <li>• Identify excessive harmonic distortion and loading to IEEE 519</li> <li>• Properly size capacitors in the presence of harmonic generating loads and identify mitigation savings</li> <li>• Evaluate harmonic mitigation, including passive and active filters</li> <li>• Optimize existing electrical distribution system</li> </ul>
<b>Short Circuit, Coordination, Arc Flash Studies</b>	<p><b>Keep your power system running smoothly</b></p> <ul style="list-style-type: none"> <li>• Identify overdutied equipment due to high fault currents caused by single system design additions or utility network changes</li> <li>• Prevent breaker nuisance tripping to ensure system coordination</li> <li>• Check that feeder and branch conductors are adequately protected</li> <li>• Generate updated Autocad® single line diagram of facility</li> <li>• Address ground fault coordination and grounding concerns</li> <li>• Identify NEC code violations</li> <li>• Determine proper Personal Protective Equipment (PPE) for workers per NFPA 70E</li> <li>• Provide arc flash tables and equipment labels if required</li> <li>• Determine arc flash boundaries for both qualified and non-qualified personnel</li> <li>• Power factor, motor starting, and load flow studies also available</li> </ul>

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