



### Water Treatment Applications:

- BOILER AND COOLING TOWER MAKE-UP WATER
- COOLING TOWER RE-USE
- WASTEWATER DISCHARGE QUALITY COMPLIANCE
- OVERALL ONSITE WATER MANAGEMENT AND WASTEWATER MINIMIZATION

## Industrial Energy & Power Solutions

Utilize the full power of a precious resource.

Water is a valuable component in the production of energy. Energy and power companies depend on clean, quality water to optimize cycles of concentration, reduce the amount of chemicals and energy used in boilers and cooling towers as well as for cooling tower re-use. Plants also need to closely follow EPA quality compliance policies for wastewater discharge and better manage water usage overall. Culligan Matrix Solutions® uses patented technology to ensure that water is treated efficiently for environmental and economic benefits.

### MAXIMIZE YOUR EFFICIENCY WITH THE TECHNOLOGY OF CULLIGAN MATRIX SOLUTIONS®.

**Flexibility** – Culligan’s Matrix Solutions feature modular technologies that can be readily “mixed and matched”, to meet the specific water treatment needs for energy and power companies. The system’s flexibility and mobility is also well suited for peaking plants in remote areas which require more robust materials, such as for power grids.

**Speed** – Culligan Matrix Solutions systems can be containerized with plumbing and wiring already built into the system prior to delivery, helping reduce onsite costs and installation time.

**Cost savings** – Water treated with reverse osmosis may optimize the efficiency of the cooling tower and reduces operating and chemical costs.

**Reduce wastewater** – The superior integrated membrane technologies and ion exchange systems of the Culligan Matrix can reduce wastewater discharge. These processes may aid utility operators in meeting EPA regulations.

**Advanced Electronic Capabilities** – The most advanced water treatment system features historical operating data logging, remote monitoring, and telemetry as a standard option at a very cost effective price. Additionally, there are full PLC capabilities available from Matrix Solutions based on the integration requirements of the client.



**END-TO-END SOLUTIONS.**

## We ask the right questions so you get the right solution.

Our consultative approach begins with a Culligan professional working with you to identify your specific water quality needs. By understanding these needs we can customize a system that gives you everything you require and nothing you don't – saving you money and helping you increase your return on investment (ROI). At Culligan, we take pride in working closely with our customers so we can provide comprehensive industrial water treatment solutions.

### WATER TREATMENT SOLUTIONS FOR THE ENERGY & POWER INDUSTRY.

#### Boiler make-up water treatment

Utility operators can improve their profitability by optimizing energy efficiency and reducing chemical costs. For instance, treating boiler feed water make-up with a reverse osmosis system from the Culligan Matrix Solutions arsenal can reduce dissolved solids. This will enable the boiler to operate at more cycles of concentration, thus reducing the blow down and make-up water requirements. Reduced make-up and blow down results in direct energy and chemical savings. Other technologies in the Culligan Matrix that could be used to improve energy efficiency include softening, microfiltration, ultra-filtration, nano-filtration, portable exchange deionization and continuous electro deionization.

#### Cooling tower re-use

Energy and Power companies require treated water to optimize the cycles of concentration for cooling tower re-use. Using a reverse osmosis module from the Matrix Solutions arsenal can help reduce the conductivity along with scale forming constituents of the makeup water. This will enable the customer to operate the cooling tower at higher cycles of concentration, thus reducing the make up water and blow down. Reduced make-up water and blow down results in direct water and sewage cost savings.

#### Wastewater minimization

Today, stringent local and national discharge requirements are creating a need for overall onsite water management and wastewater minimization. These new demands at times require water system modifications, equipment retrofits, or system replacements to enable utility operators to minimize the use of water and wastewater. With our comprehensive discovery process and consultative approach, we can design a solution that meets your overall onsite water management and wastewater minimization needs.

“ As the energy & power industry broadens, the spectrum of water treatment beyond just process water and wastewater - to include water reuse - opportunities for cost and environmental savings multiply. The Culligan Matrix Solutions® approach may help power plants improve environmental compliance and sustainability by reducing overall water consumption with efficient water balance plans.”



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For over 75 years, Culligan has made better water. Our global network, comprised of 800+ dealers and international licensees in over 90 countries, is dedicated to addressing your water-related problems. As a worldwide leader in water treatment, our sales representatives and service technicians are familiar with the local water conditions in your area. Being global and local position us to deliver customized solutions to commercial and industrial water issues that affect your business and your bottom line.

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