POWER SYSTEMS

for Water Treatment Facilities

KOHLER®
IN POWER. SINCE 1920.

KOHLER® AND SDMO®: OUR STORY

A global force in power solutions since 1920, Kohler is committed to reliable, intelligent products, advanced engineering and responsive after-sale support.

And you can find us on nearly every continent on the planet. Over the years, we've amplified our global reach—acquiring SDMO Industries, a worldwide leader known for its premium range of generator sets. Together, we've built on the legacy of two leading brands to create one of the largest generator manufacturers in the world—and continued an unwavering focus on reliable power systems and innovation.

Our R&D, manufacturing, sales, service and distribution facilities span the globe from Kohler, Wisconsin, to Brest, France. And while we've maintained two world-renowned brand names, today KOHLER and SDMO operate as an integrated global organization that's leading the way in design and manufacturing.

We deliver integrated industrial power systems for emergency, prime and continuous applications worldwide—from data centers and hospitals to water treatment facilities and government offices. With a deep understanding of your industry, we excel in designing customized power systems that simplify your most complex challenges.

DEMAND IS INCREASING—AND SO ARE REGULATIONS.

Here's What You Need to Know.

As water consumption doubles globally every 20 years, scarcity becomes an increasing concern, and individuals and municipalities are more focused than ever on using this resource wisely and efficiently for industrial, domestic and agricultural uses. That concern and new technologies are driving a rapid evolution in the reclamation and reuse of wastewater—and having a significant impact on the power systems needed to support water treatment plants. In addition, countries are increasingly using water desalinization to transform seawater and brackish water sources into clean drinking water.

TECHNOLOGY

Like other industries, water and wastewater treatment has gone high tech. Computers now control water-processing and -delivery systems, and sophisticated digital water meters and data analysis can improve operations and reduce costs.

NEW PROCESSES

As the technology industry has grown, plants must remove exotic metals and other items that haven't traditionally been in wastewater. Tried-and-true methods such as reverse osmosis, ion exchange and oxidation are being supplemented with membrane and thermal technology, high-efficiency centrifugal filters, biogas-fueled cogeneration systems and ultraviolet light disinfection. These sensitive and highly expensive new technologies require more power than previous systems.

AGING INFRASTRUCTURE

While technology has been a major focus, physical infrastructure has been top of mind for many facilities as well. Pipelines, tunnels, dams and pumping, storage and treatment equipment have aged in many places and updating them requires a massive undertaking. To address the expense of a central sewer and wastewater treatment facility, many municipalities are relying on satellite reclamation plants. These solutions have a significant impact on backup power deployment plans and also impact the size of generators needed.

INCREASING REGULATIONS

What was once considered a waste-disposal system is now considered a resource recovery system with an industry-wide drive to reclaim and reuse wastewater. Regulations are tightening, which has increased costs. This has fueled a desire to maximize costs savings wherever possible while simultaneously reducing the environmental footprint. Choosing an appropriately sized generator can minimize the impact on your budget and your community.

ASSESSING FACILITY NEEDS

While most citizens take clean water for granted, a power outage could quickly jeopardize this essential resource. Reliable backup systems are critical to keep pumps and other key equipment running and avoid potential consumer safety issues. Continuous power is also necessary to prevent flooding and discharge of untreated wastewater, which can lead to environmental issues and fines.

POWER SUPPLY

Redundancy is an essential design feature for sanitary and wastewater treatment facilities to ensure continuous operation of equipment and to keep communities supplied with fresh, safe water. Though technology has improved, the desalinization process requires a great deal of energy to purify brackish and seawater.

EMISSIONS

Stationary emergency generators often require emissions certification from governing agencies such as the EPA or EU, or more local certification such as CARB or AQMD in the U.S. Any prime applications may require meeting emissions standards that are even stricter such as EPA Tier 4 Final.

RESPONSE TIME

Wastewater facilities and the extended infrastructure of pumping and lifting stations have power needs 24/7, so there's no time to wait for a response team. They need a service team that can provide timely emergency recovery no matter where the power system is installed. Remote monitoring can help increase response time, lower operating costs and help improve safety.

Take a trip to America's heartland, where KOHLER® power systems are actively protecting the lives of thousands of families across Iowa at the **Rathbun Regional Water Association**.

KOHLERPOWER.com/Rathbun

POWER CONSIDERATIONS

Each facility has unique power needs based on its design, the amount of water being processed and treatment methods. In addition, while some facilities look to backup power solely in the event of an outage, others use generators to offset the power supply needed during peak season—especially during midafternoon in summer. All of these considerations can lead to a customized solution.

TOTAL SYSTEM INTEGRATION

Every detail down to the last bolt. This isn't your typical power system. It's a KOHLER® industrial power system—which means it's designed and manufactured with KOHLER components—including generators, transfer switches, paralleling switchgear and controllers. But the best part? We customize every power system to your specs. So no matter how large or complex your job, everything will work together seamlessly.

UPTIME AND RELIABILITY

Backup systems must start quickly and reliably, as any interruption in the water treatment process can be expensive or dangerous to water consumers. If your backup power system supports central facilities, as well as critical lifting and pumping sites, it must perform without fail under various operating conditions. Robust starting of low- and high-voltage motors is essential to keep water flowing efficiently through the treatment process.

PERFORMANCE

A reliable power system plays a major role in helping water treatment facilities prevent environmental and health disasters. Generator sets have the ability to provide backup power within seconds of a break in utility power supply, and transfer switches should provide seamless automatic switching between the electrical power from the utility and the backup power system.

KOHLER Generator Sets

- Generators meet tough industry testing and quality standards
- PMG alternators provide advanced short-circuit capabilities
- Diesel generators feature superior load factor, reliability and availability, and they offer one-step load acceptance

KOHLER Automatic Transfer Switches (ATS)

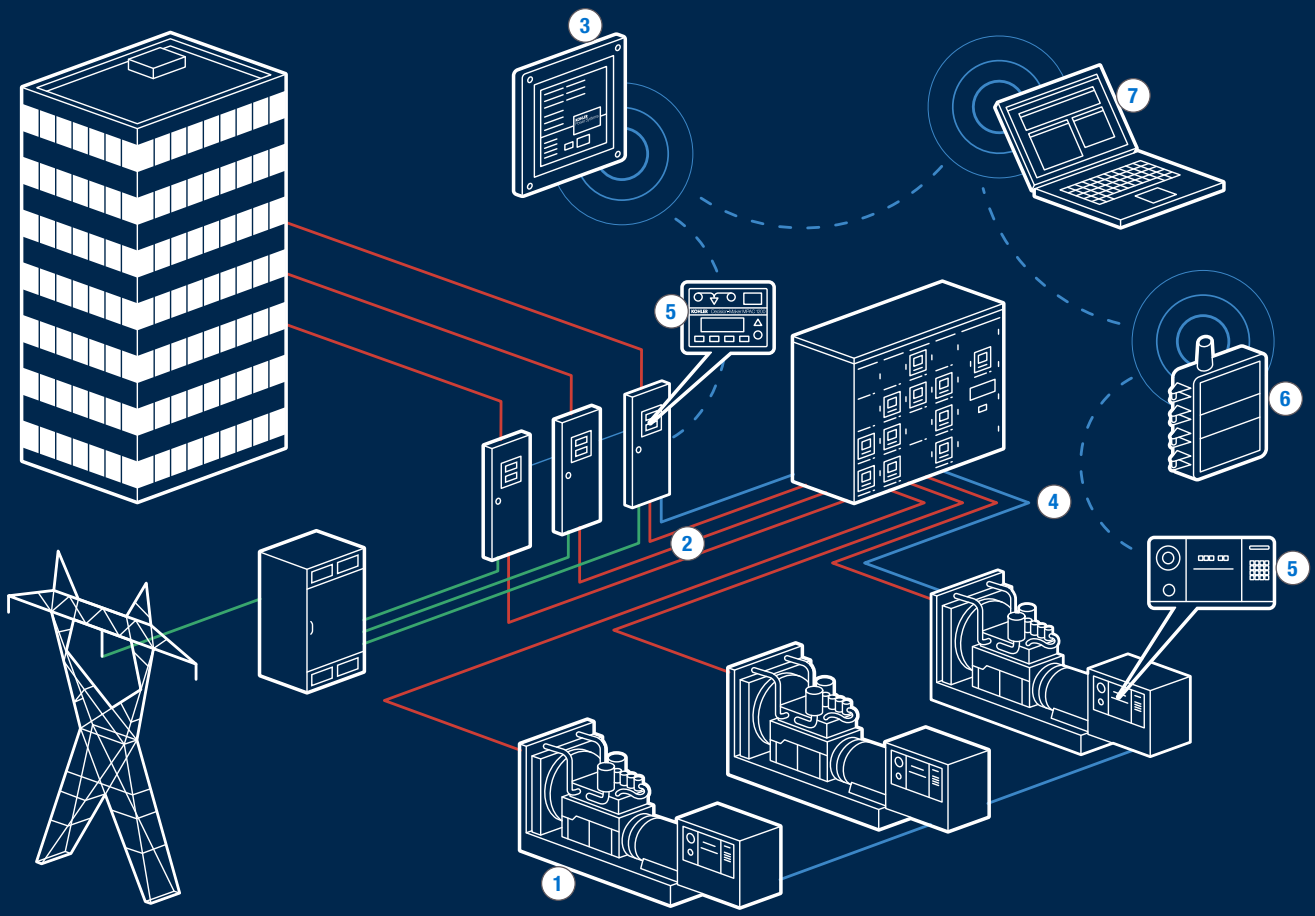
- Built and tested in Kohler, Wisconsin
- Part of a fully integrated solution
- Includes standard, bypass-isolation and service-entrance configurations
- CSA and IBC certification available

KOHLER Switchgear

- Built and tested in Kohler, Wisconsin
- Part of a fully integrated solution
- Simple and complex solutions available

BACKUP POWER CAN OFFSET PEAK OPERATIONS TOO.

Energy management programs can help reduce your facility's electrical power consumption during periods of high demand on the power utility.



1 **KOHLER® GENERATOR**
Gas generators 25–1300 kW
Diesel generators 10–4000 kW

2 **KOHLER AUTOMATIC TRANSFER SWITCH**
Open, closed and programmed transition operating modes; standard, bypass-isolation and service-entrance switch configurations

3 **KOHLER REMOTE ANNUNCIATOR**
Remote monitoring and testing of transfer switches

4 **KOHLER PARALLELING SWITCHGEAR**
Low and medium voltage

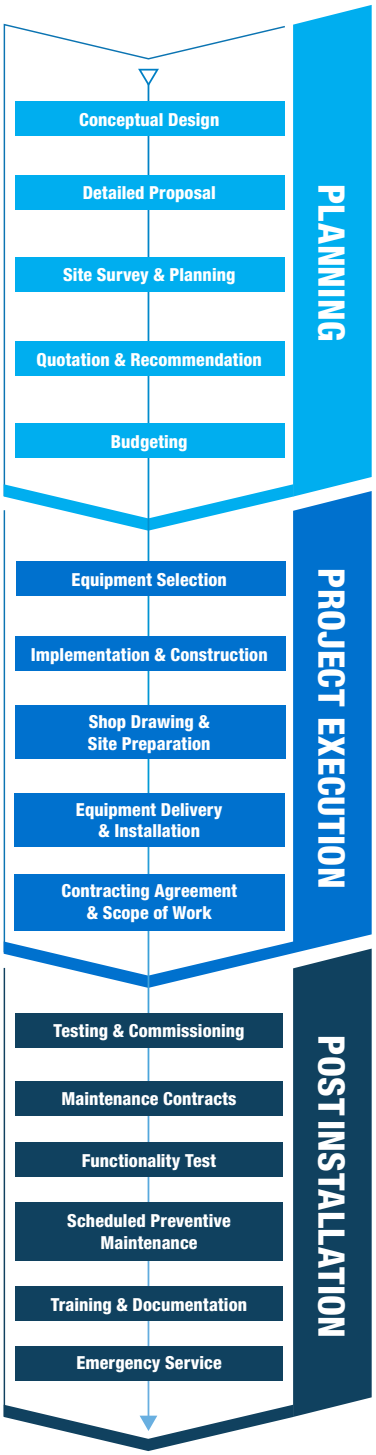
5 **KOHLER DECISION-MAKER® CONTROLLER**
Control, monitor and system diagnostics

6 **KOHLER WIRELESS MONITOR**
Performance monitoring around the clock

7 **KOHLER MONITORING SOFTWARE**
Monitors generators and transfer switches from a PC

THE KOHLER® DIFFERENCE

TOTAL SYSTEM INTEGRATION



As a single-source provider, you can be confident that every power system is loaded with designed and manufactured components from Kohler. **TOTAL SYSTEM INTEGRATION** assures you that no matter how large or complex the project, everything works together seamlessly–from generators and transfer switches to paralleling switchgear and controllers. That's the KOHLER difference.

End-to-End Management

From planning the design and selecting the equipment to testing and commissioning, we're focused on delivering reliable, custom-designed power systems tailored to your specifications. Agile manufacturing, rigorous testing and careful commissioning assure you of a solution that fits your business–and your budget.

Customized Solutions

Your KOHLER/SDMO® power system is customized, built and tested by a dedicated team of experienced applications engineers. They've designed power systems for hundreds of data centers and combine industry experience with Kohler's agile manufacturing process to deliver your purpose-built solution.

Local Service: Nationwide or Around the World

A single call assures you of expert support and problem resolution day or night. Kohler's worldwide dealer and distributor network has access to complete inventories of KOHLER genuine parts and provides factory-trained service technicians who are fully vetted and thoroughly tested.

FACILITIES THAT PUT THEIR TRUST IN KOHLER® AND SDMO®

WATER AND SANITARY TREATMENT PLANTS, PUMPING STATIONS	COUNTRY	QTY	kW/kVA
Algérienne des Eaux	Algeria	4	1900 kVA
Algérienne des Eaux	Algeria	2	1540 kVA
Algérienne des Eaux	Algeria	2	1400 kVA
Entreprise Nationale des projets Hydroliques de l'Ouest	Algeria	1	1850 kVA
Entreprise Nationale des projets Hydroliques de l'Ouest	Algeria	1	715 kVA
FOREMHYD	Algeria	1	800 kVA
FOREMHYD	Algeria	1	2500 kVA
Ministerio da Energia e Aguas	Angola	1	1500 kW
Wastewater Treatment Plant	Australia	1	694 kVA
Water Filtration Plant	Australia	5	250-500 kVA
Water Treatment Plant	Australia	3	2800-3300 kVA
Reschreiter Energietechnik GmbH	Austria	2	1500 kVA
Reschreiter Energietechnik GmbH	Austria	1	1540 kVA
Novaedes NV	Belgium	4	2100 kVA
Société Bruxelloise de gestion de l'eau	Belgium	1	1000 kVA
Cape Breton Regional Municipality Plant and Lifting Stations	Canada	9	60-1000 kW
City of Prince George Wastewater Treatment Plant	Canada	2	100-1000 kW
City of St John's Petty Harbour Water Treatment Plant	Canada	1	1250 kW
Deloro Arsenic Treatment Plant	Canada	1	230 kW
Grand Rapids Water Treatment Plant	Canada	1	200 kW
Hagersville Water Treatment Plant	Canada	1	1000 kW
Kitchener/Waterloo Water Treatment Facility	Canada	2	1000 kW
Orilla Water Treatment Facility	Canada	1	800 kW
Pembina Valley Water Cooperative	Canada	1	300 kW
Red Sucker Lake First Nation Wastewater Treatment Plant	Canada	2	30-500 kW
Régie Intermunicipale d'assainissement eaux usées	Canada	1	500 kW
Réservoir d'eau Mont-Habitant	Canada	1	100 kW
Réservoir d'eau potable Masson	Canada	1	500 kW
Réservoir d'eau potable Montmagny	Canada	1	230 kW
Resort Municipality of Whistler Water Treatment Plant	Canada	1	1750 kW
Toronto Sewer Pumping Station	Canada	1	500 kW
Usine de traitement d'eau potable Trois-Riviéres	Canada	2	750 kW
Water Authority Cayman	Cayman Islands	2	100-200 kW
Badr Constructions Co. S.A.E	Egypt	2	2800 kVA
Badr Constructions Co. S.A.E	Egypt	1	2200 kVA
Beni Suef Wastewater Treatment Plant	Egypt	3	1820 kW
Concord for Engineering & Contracting	Egypt	2	2200 kVA
El Minia Wastewater Treatment Plant	Egypt	1	1820 kW
Fayoum Wastewater Treatment Plant	Egypt	2	1820 kW
Metito Water Treatment Plant	Egypt	2	440-1540 kVA
Metito Water Treatment S.A.E.	Egypt	1	1540 kVA
Mohamed Abdullah & Co., Fine Peak	Egypt	1	2750 kVA
Helsingin Seudun Yhdyskuntapalvelut	Finland	1	2050 kVA
Les Eaux du Niger	France	1	1100 kVA
Les Eaux du Niger	France	1	1250 kVA
Les Eaux du Nord	France	1	2000 kVA
Organom OVADE	France	1	839 kVA
SEDIF	France	1	800 kVA
SILA	France	1	1400 kVA
STEP Carré de Réunion	France	1	1830 kVA
STEP de Vence (06)	France	1	650 kVA
Syndicat Intercommnunal pour l'aménagement hydraulique du Dadou	France	1	825 kVA
Syndicat Intercommnunal pour l'aménagement hydraulique du Dadou	France	1	1100 kVA
Syndicat Intercommunal du Bassin d'Arcachon	France	2	1250 kVA
North Lebanon Water Establishment	Lebanon	5	180-800 kW
SUEZ	Morocco	1	880 kVA
SUEZ	Morocco	1	1100 kVA
Societe d'exploit des eaux du Niger	Niger	1	1100 kVA
Lillehammer Municipality	Norway	1	1250 kVA

WATER AND SANITARY TREATMENT PLANTS, PUMPING STATIONS	COUNTRY	QTY	kW/kVA
La Autoridad de Acueductos y Alcantarillados	Puerto Rico	6	50-1000 kW
Station d'epuration de Bras-Panon	Reunion	1	165 kVA
Saline Water Conversion Corporation	Saudi Arabia	1	550 kVA
VEOLIA	Slovenia	1	1136 kVA
Consejo Insular de Aguas De Gan Canarias	Spain	1	2000 kVA
Process Components Limited	Trinidad and Tobago	3	38-1250 kVA
Process Components Limited	Trinidad and Tobago	2	1250 kVA
Allerton Waste Recovery Park	United Kingdom	1	2100 kVA
Allerton Waste Recovery Park	United Kingdom	1	2100 kVA
Tarplett Generator Services Ltd.	United Kingdom	1	1100 kVA
Alderwood Water District (Washington)	United States	1	2500 kW
Anchorage Water & Wastewater Utility (Alaska)	United States	4	25-150 kW
Central Arkansas Water	United States	3	400-1600 kW
Chandler Ocotillo Water Reclamation Facility (Arizona)	United States	1	2000 kW
Chester Water Authority (South Carolina)	United States	2	200-300 kW
Christiansburg Pump Station (Virginia)	United States	1	900 kW
City of Enterprise Wastewater Treatment Plant (Alabama)	United States	2	600 kW
City of Fort Mill—Northern Pump Station (South Carolina)	United States	1	230 kW
City of Friendswood Water Utility (Texas)	United States	29	25-300 kW
City of Hot Springs Water Treatment Plant and Lifting Stations (Arkansas)	United States	6	100-800 kW
City of Laredo (Texas)	United States	8	200-2000 kW
City of San Diego Wastewater Treatment Plant and Pumping Stations (California)	United States	6	50-1000 kW
City of Stockton Water Treatment Plant (Kansas)	United States	1	350 kW
Eastern Regional Wastewater Treatment Plant (Kentucky)	United States	1	2500 kW
Fairfield Wastewater Treatment Plant (Iowa)	United States	2	400 kW
Gratiot Area Water Aurthority (Michigan)	United States	1	500 kW
Greater Cincinnati Water Works (Ohio)	United States	2	500 kW
Harpeth Valley Utilities District (Tennessee)	United States	7	40-450 kW
Iowa Great Lakes Sanitary District	United States	5	100 kW
Lake Charles Wastewater Treatment Plant (Louisiana)	United States	4	400-2500 kW
Lake County Public Works (Illinois)	United States	11	40-500 kW
Lehigh County Authority (Pennsylvania)	United States	11	40-500 kW
Manatee County Wastewater Treatment System (Florida)	United States	19	20-200 kW
Marinette Water Utility (Wisconsin)	United States	1	800 kW
Metro Water Services (Tennessee)	United States	31	100-2000 kW
Metropolitan Sewer District (Missouri)	United States	16	30-350 kW
Michelson Water Reclamation (California)	United States	3	500-1000 kW
Monroeville Municipal Authority Pump Station (Louisiana)	United States	1	1000 kW
Newton County Lifting Stations (Georgia)	United States	4	100-400 kW
North Lee County Water Well Field (Florida)	United States	7	200 kW
Northwestern Water and Sewer District (Ohio)	United States	6	20-200 kW
Norwalk Water Pollution Control (Connecticut)	United States	3	50-230 kW
Pasco County Water Treatment Plant (Florida)	United States	2	550-2500 kW
Pawtucket Water Authority Water Treatment Plant (Rhode Island)	United States	2	1820 kW
Portland Water Bureau (Oregon)	United States	1	300 kW
Portland Water District (Maine)	United States	9	30-60 kW
Rathbun Rural Water Association (Iowa)	United States	1	1600 kW
Rock Falls Water Reclamation and Lifting Stations (Illinois)	United States	8	25-1750 kW
Rock River Water Reclamation District (Illinois)	United States	7	45-1250 kW
Rockland County Sewer (New York)	United States	4	50-80 kW
Schuykill County Municipal Authority (Pennsylvania)	United States	3	125-500 kW
Silicon Valley Clean Water (California)	United States	3	1000 kW
South Bermuda Reclamation Facility (Florida)	United States	2	1750 kW
Stevens Point Water Department (Wisconsin)	United States	4	400 kW
Town of Colonie Latham Water District (New York)	United States	1	900 kW
Wayne Sanitary District (North Carolina)	United States	4	40-200 kW
West Branch Sewer Authority (Pennsylvania)	United States	5	20-40 kW
Winchester Municipal Utilities (Kentucky)	United States	2	1600-2000 kW
Public Utility—Water Treatment Plant	Vietnam	2	410-1800 kVA

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