water treatment solutions for coal seam gas
For more than a century, SUEZ has provided sustainable solutions to help customers around the globe address some of the world’s most pressing challenges. And today, our commitment to doing so is even stronger. We are forward-thinking and lead in developing water, water reuse, wastewater treatment and process solutions our customers need to operate more efficiently and profitably while minimizing their environmental footprint. Our goal is the same as yours: to help industries and communities prosper.

addressing today’s challenges

Today, corporations, individuals and governmental bodies alike are focused on energy issues—and rightly so. According to the International Energy Agency, by 2030 the world’s energy demand is estimated to be 40 percent more than in 2007, with China and India accounting for more than half of that increase. At the same time, countries are seeking ways to reduce greenhouse gas emissions.

The prospects of natural gas are promising. Unconventional gas sources—shale and tight gas, and coal seam gas are among the three most viable today—and innovative drilling methods are making up an increasingly larger percent of the supply picture for a renewable energy future. The opportunities are great and so are the challenges.

While it varies considerably with geography, water volume and water quality are critical issues for the coal seam gas production industry. In fact, one well of coal seam gas could produce more than 17,000 gallons (64.4 m³) of water per day, and the challenge is recovering the water for reuse, concentrating the salts and disposing of the waste in ways that minimize impact to the local water sources and the environment. Meanwhile, the regulatory climate and environmental policies for water discharge from coal seam gas extraction are evolving rapidly and differ widely by city, state and country. Yet, the need for economically viable and environmentally sound solutions is urgent and industry-wide.

coal seam gas solutions

We understand the challenges and recognize the opportunities of today’s unconventional gas industry. Indeed, regulatory, environmental and financial pressures keep growing. To help businesses survive and thrive in today’s unconventional gas industry, SUEZ provides innovations in chemical and equipment technology to enhance efficiencies while safeguarding natural resources and saving money.

• One-source technology accountability includes pretreatment chemistries and equipment, ultrafiltration, reverse osmosis, electrodialysis reversal, brine concentration and crystallization—providing the process solution that recycles and/or reuses water for the surrounding communities.

• Containerized systems allow for fast turnaround, flexibility and a variety of solutions that meet various gas extraction profiles and requirements.

• Integrated power and water reduces the overall carbon footprint by using future waste heat from power generation to produce desalinated coal seam gas water.

• Ultrafiltration and reverse osmosis separation technologies remove dissolved impurities such as saline to optimize recovered water composition and beneficial use byproducts.

• Salt removal and recovery offerings combine physical separation and chemistry optimization to reduce the total operating cost of salt water disposal well operations.

• Selective pure salt precipitation converts waste brine to value-added crystalline products such as sodium chloride and sodium bicarbonate.

• Discharge water management and reuse provides non-potable water to a variety applications.

• The thermal products group of brine concentrators and crystallizers combines expertise related to zero liquid discharge and pure salt production.

• The mobile water fleet—the largest in the world—meets demand for on-site water treatments through emergency, short-term leases and long-term outsourcing.

• Complete range of membrane and filtration technologies provide influent treatment of a diverse variety of non-potable water sources.

• Zero Liquid Discharge (ZLD) systems offer extensive experience in evaporation and crystallization to eliminate wastewater discharge and can enable process chemicals and monitoring—optimizing plant productivity and water systems while safeguarding assets and ensuring environmental protection.

• A range of biological filtration and coagulation technologies enable heavy metal removal to improve wastewater quality.

• Water treatment provides deposit and corrosion control.
the SUEZ advantage

As a strategic business partner, SUEZ can provide a complete set of integrated chemical and equipment solutions to help manage and optimize water resources on-site and at facilities. Our proven technologies help unconventional gas facilities convert coal seam gas-produced wastewater into beneficial byproducts as well as treat and reuse water for industrial and agricultural purposes. From reduced water usage to increased productivity, we deliver the results to drive your performance—financial and environmental. Whether power and water, energy services, oil and gas, financial or rail, we combine the best of SUEZ to help seamlessly solve your biggest challenges.

the SUEZ solution for your coal seam gas needs will:

- Optimize system recovery and minimize the volume of brine produced. We have designed an overall system recovery of up to approximately 92 percent.
- Reduce the complexity and costs associated with installation of containerized design while also allowing for easier future relocation to other sites.
- Provide the quantity and quality needed with each system, designed for up to 400,000 gallons of water per day (90,840 mld).
- Control brine wastewater by feeding the waste stream to SUEZ’s brine concentrators and crystallizers to achieve a further reduction in brine, which can be driven using waste heat from power generating facilities.
With a name synonymous with quality, SUEZ is a trusted global partner for unconventional gas companies with installations around the world—securing our ability to support the entire life of your project. With a broad range of products and services for each step of the process, SUEZ’s integrated solutions and unique expertise help manage and overcome important challenges in an ever-evolving industry, while ensuring the responsible and sustainable resource savings our customers across the globe have come to expect. Through innovation, breakthrough technology and dedicated teams of global experts, we can help you successfully compete—and win—in today’s unconventional gas industry.

You can count on us for:

- Solid process design for variability and reliability
- Vast design, construction, commissioning and operations experience
- Assurance of delivery
- Temporary water solutions
- Support from our global and local teams of professionals
- Broad solution platforms
- Integrated power and water solutions
learn how SUEZ is helping customers solve their greatest challenges by visiting www.suezwatertechnologies.com