

# A MIDWEST COMBINED CYCLE POWER PLANT REGAINS MEGAWATTS.

## Case Study

A power plant in the Midwest was experiencing reduced power output due to scale deposits within their chillers. The plant has a total of four systems each consisting of two 850 ton chillers and two 850 ton cell cooling towers. The chillers, which cool the air being fed to the turbine were experiencing high approach temperatures that were costing the plant reduced capacity in megawatt production. After having a consultation with senior plant personnel it was determined that the scaling in both the chillers and cooling towers was contributing to the reduced performance.

*“Not only are the chillers operating more efficiently with minimized energy consumption but the plant is producing higher megawatt production”*

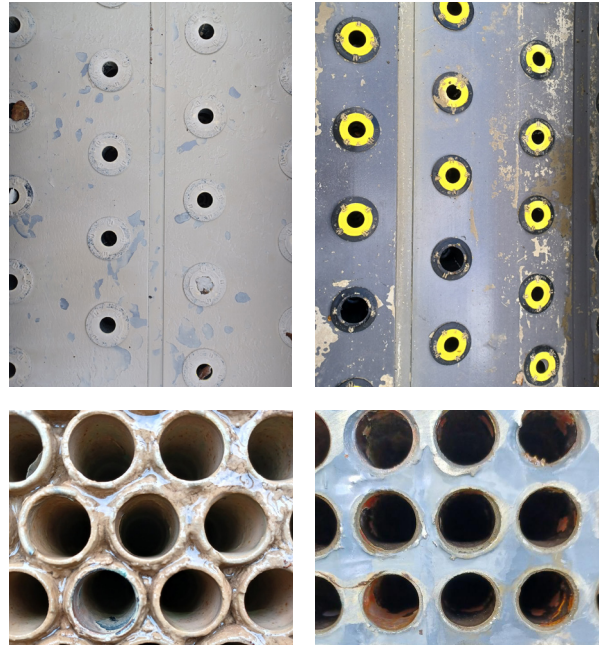
Though the plant did perform cleanings by isolating and cleaning just the condenser barrels, the plant still was not achieving the desired performance. As we dug deeper into the system operation we determined the cooling towers also had significant scaling and were not rejecting heat as designed.

After careful review of the cooling system and fouling factor encountered, the recommendation was made to utilize (5) 330-gallon totes of ScaleBreak-MP for the first 1,700 ton system cleaning. ScaleBreak-MP is a biodegradable citric based descaling solution that dissolves 2.5 pounds of scale.

Upon completion of the first system cleaning, the plant indicated the results were outstanding! The chillers are operating at full load with a 75° F outside ambient temperature. The chiller approach went from a 12 to a 3! Not only are the chillers operating more efficiently with minimized energy consumption but the plant is producing higher megawatt production. The plant also indicated an increase in overall flow meaning the piping is also now clean. The 1,650 gallons of ScaleBreak-MP was completely neutralized after the cleaning thus removing over 4,100 pounds of scale!

The plant was going to wait until spring to clean the remaining three cooling systems but were so encouraged by the results that they cleaned them over the next month.

Please contact Goodway Technologies to help your facility regain efficient cooling.



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