

# Energy Corp Becomes Energy Efficient with MeeFog™ System



The utilities' head quarters was originally conditioned by seven air handlers utilizing electric steam humidifiers. After deciding to go green, Alliant turned to MeeFog.

## THE BENEFITS

- Reduced energy consumption
- Lower maintenance costs
- \$300,000 savings per year
- ROI achieved in less than 2 years

## Alliant Energy Corporation Madison, Wisconsin, USA

Alliant Energy Corporation provides regulated electric and natural gas service to approximately 1 million electric and 420,000 natural gas customers in the states of Iowa, Wisconsin and Minnesota. Located in the heart of the Midwest in Madison, Wisconsin, Alliant Energy has nearly 5,000 employees and annual operating revenues in excess of \$3.3 billion.

The utilities' head quarters building in Madison is conditioned by seven air handlers utilizing electric steam humidifiers for employee comfort and well being, and to reduce static electricity during the winter months. Because of their involvement in energy rebate programs in all of their service areas, the decision was made to upgrade the head quarters humidification systems to a more energy efficient technology. An active sponsor of energy reduction technologies, Alliant Energy would not have benefited from the incentive programs because the projected project payback was less than two years for the installation of the energy efficient Mee Fog humidification systems.

Gordon Kensgaard, facilities manager for the Madison HQ facility, contacted the Best Group to assist him in selecting the new humidification system. The Best Group works with steam and adiabatic humidification systems, and recommended Alliant investigate the Mee Fog high pressure systems. The Mee Fog systems utilize high pressure to atomize the water into billions of super fine droplets for quick absorption. The energy required to atomize the water is 1/100 of that required by electric steam humidifiers.

The building has seven air handlers, with a total of 228,000 cfm operating on air side economizer cycle. The units are served by two high pressure Mee Fog pump systems that provide 1000 psi water to the nozzle headers via staging solenoids. Each pump system has a dedicated water treatment system to remove all of the dissolved solids from the water before it is introduced into the air stream. Capacity of each system is controlled by the building control system through staging solenoids. The BAS determines how many nozzles are needed to match the humidity load under all weather conditions, and energizes the correct sequence of high pressure valves.

The humidity is introduced into each air handler between the

Humidifier

pre-heat coil and the cooling coil. Any moisture that is not absorbed in this section is collected on a droplet filter and drained.

The installed capacity in all seven air handlers is 2,832 #/hr. The electrical load for the Mee system is 4.5 kW. Annual energy savings, as compared to electric steam generating humidifiers, is in excess of \$300,000, with a further reduction of \$15,000 in annual maintenance costs.

## About Mee Industries Inc.

For over 45 years Mee Industries has led the world with innovative water fog technology. MeeFog systems are used to humidify and cool many industrial, commercial and agricultural processes and to create interesting and dynamic special effects. Today there are over ten thousand MeeFog systems in use around the world. The MeeFog team looks forward to helping you with your fogging project.

## The Mee Advantage: Experience, Innovation, Performance

In 1969, Thomas Mee Jr. a former Cornell University research scientist, founded Mee Industries. The company originally manufactured high-tech electro-optical, meteorological instrumentation, but by the early 1980's, high-pressure water fogging had become the main focus of the company. Today, Mee Industries provides innovative, highly effective, economical fog solutions for many industrial applications including gas turbine inlet-air fogging, commercial and industrial building humidification and cooling, data center humidification, outdoor air conditioning, greenhouse climate control, wine barrel storage humidification, as well as dynamic special effects for the entertainment industry and theme parks.

## Industry Leaders — Focused on Fog Technology

Mee specializes in providing custom-engineered, turn-key high-pressure fog solutions. We are committed to researching, developing, marketing and supporting the most innovative and reliable fog systems available anywhere in the world.



### MeeFog™ System Applications

#### RO WATER TREATMENT

#### HUMIDIFICATION

- Commercial HVAC
- Manufacturing

#### EVAPORATIVE COOLING

- Data Center Cooling
- Condenser Cooling
- Heat Exchanger Cooling

#### GAS TURBINE COOLING

- Power Generation
- Oil, Gas, Petrochemical
- Offshore Operations

#### SPECIAL EFFECTS

- Amusement Parks
- Themed Entertainment
- Zoos, Aquariums, Gardens
- Fountain Art
- Private Residence

#### AGRICULTURE/OTHER

- Greenhouses
- Conservatory
- Wine Barrel Storage
- Cold Storage
- Dust Suppression
- Odor Control
- Cement Curing

#### HEADQUARTERS

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