

CLEAResult®

DATA CENTER OPTIMIZATION CASE STUDY



Project at a glance

\$519,500

total project annual cost savings

6.493M kWh

total project annual energy savings

\$228,600

total utility incentives

<2yrs

payback for customer

>50%

customer ROI

6 months

total construction time

National data center saves \$500k on annual energy costs

A national company with a large data center in Austin, Texas, turned to CLEAResult to increase efficiency and reduce operating costs while improving redundancy, longevity and reliability

CLEAResult analyzed and summarized records from the data center to understand energy usage and patterns, then designed a cooling retrofit using exhaustive research, extensive experience and proven technology.

Technology Improvements

- 697-ton variable speed centrifugal chiller uses 80 percent less energy than existing unit
- Ultra-quiet tower with demisting cone eliminates most of the vapor plume visible to surrounding neighborhoods
- Redundant 40-horsepower condenser water pumps with VFDs provide energy savings and reliability
- 100-micron in-line, low pressure, self-cleaning, stainless steel filter reduces operational costs
- Redundant, chilled-water pumps converted to variable-speed operation to eliminate the need for chilled-water bypass, reducing energy use
- Direct drive, EC plug fans installed in 24 air handlers offer quieter, more reliable service and significant energy savings
- Existing chillers remain intact as emergency backup, adding further redundancy

The results

The project will save more than \$500,000 in annual energy costs and will pay for itself in just 21 months. In addition, the project achieved the following environmental impact equivalencies:

- Eliminating the annual greenhouse gas emissions of 954 cars, or
- Eliminating the carbon dioxide emissions from the electricity used by 686 homes

“

This is by far the most efficient operating system we have here, and the design is impressive. ”

Client Critical Facilities Manager



Talk to us

Learn how CLEAResult can help you change the way you use energy. Contact us at 512.327.9200, info@clearesult.com or visit clearesult.com.