

San Diego State University wins Best Practices Award for Monitoring Based Commissioning project at Campus Laboratory Building



BUILDING/PROJECT SUMMARY

100,000 square feet

196 fume hoods

Annual Energy Savings:

410,000 kWh electricity
480,000 ton-hours
central plant chilled water
6,900 MMBTUH central
plant steam

Project Economics:

\$180,000 annual energy
cost savings
\$114,000 project cost
8 month simple payback
period

Greenhouse Gas Reductions:

575,000 lbs/year of CO₂

MEASURES IMPLEMENTED INCLUDED:

- Reduced minimum air change rate from 12 to 6 air changes per hour
- Repaired failed laboratory fume hood and room pressurization controllers
- Replaced failed fume hood valve linkages
- Reconnected fume hood sash sensors
- Eliminated alternating heating and cooling of discharge air
- Tuned PID loops to prevent hunting of control valves
- Replaced inoperable differential pressure sensors
- Calibrated temperature sensors
- Sealed leaking ductwork
- Eliminated irregular cycling of exhaust fans and chilled water pumps
- Fully opened throttling valves to enable VFDs to control chilled water flow
- Implemented differential pressure reset

San Diego State University was awarded the Best Practices Award for its Monitoring Based Commissioning Project at Chemical Sciences Laboratory at the 2006 UC/CSU/CCC Sustainability Conference. The commissioning team, consisting of Cogent Energy as the Commissioning Agent, Newmatic Engineering as the laboratory system commissioning contractor, and personnel from San Diego State University operations, were able to reduce energy usage in this energy intensive building by 15%. The commissioning team identified over 100 corrective actions which were implemented during the project.



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