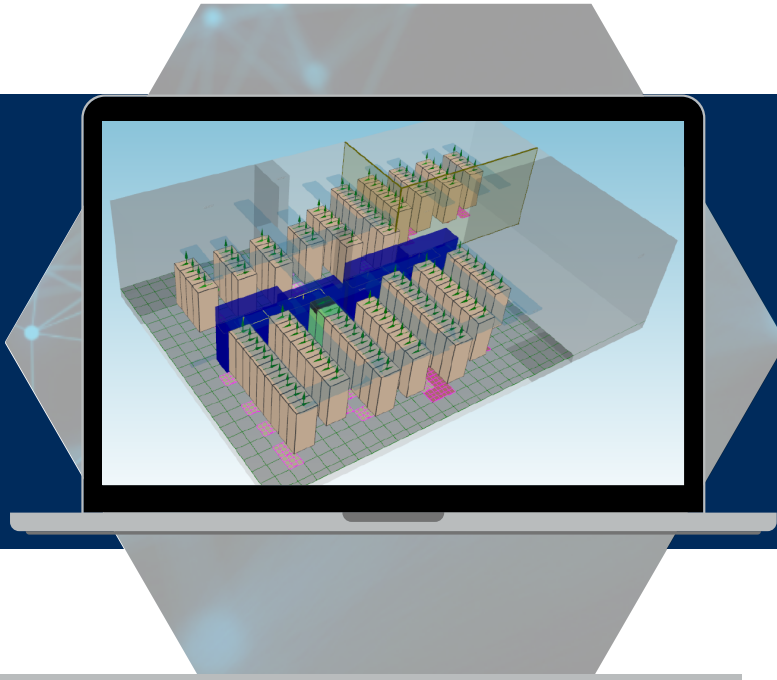
SCTi
STRATEGIC CLEAN TECHNOLOGY

CASE STUDY

FLOATING HEAD RETROFIT



SITE OVERVIEW

A small data center, approximately 2,000 sq. ft with an IT load of 127kW. Cooling is supplied by four Liebert DS077 CRAC units.

CLIENT PAIN POINTS

- High energy costs
- Insufficient redundant cooling for maintenance
- Hotspots and temperature differential across the room

EXECUTION

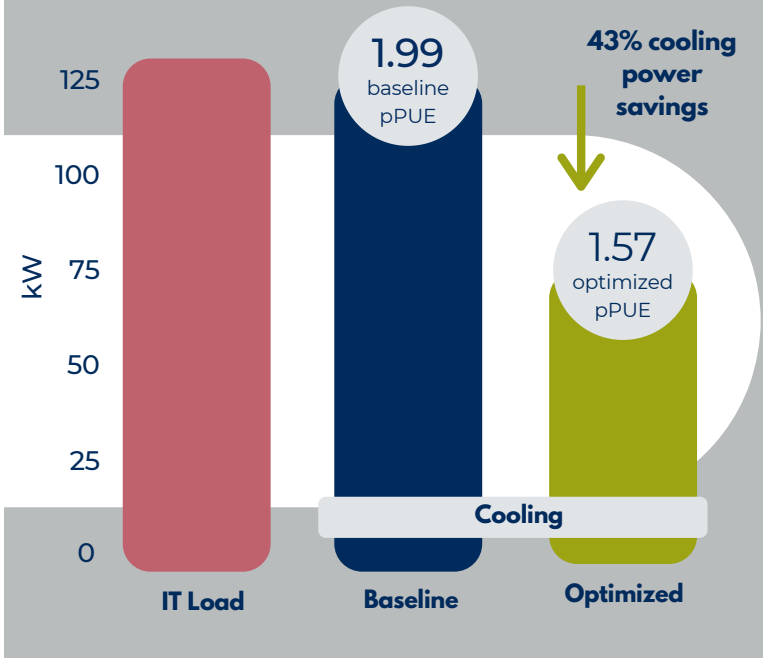
- Full site audit, CFD & technical & financial feasibility analysis
- Floating head retrofit on all four CRAC units
- Proposed design to redirect/rebalance supply air

BUSINESS CASE

Annual Cooling Energy - kWh	1,123,193
Annual Energy Savings - kWh	484,684
Annual Cost Savings	$67,856
Project Cost	$134,494
Incentive	-$48,468
Net Project Cost	$86,026
Energy Savings	43%
Payback (Years)	1.27

OPEX PERFORMANCE

POWER USE



END USER BENEFITS

- 43% reduction in cooling energy
- Increase CRAC Cooling Capacity - increased hours of redundant cooling for maintenance
- Increased unit efficiency and reduced wear and tear
- Carbon footprint reduction of 152kg of refrigerant equivalent to 270 tonnes of CO2

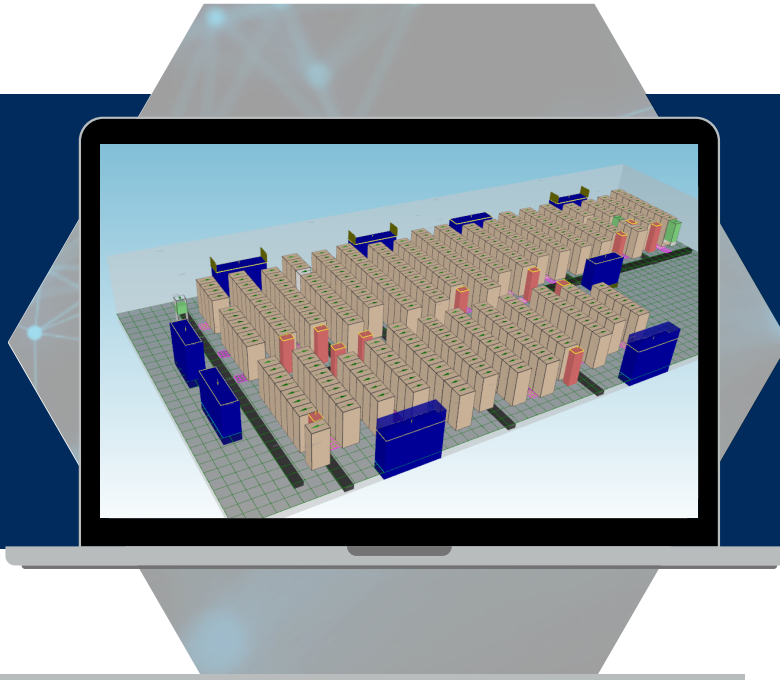
1-866-831-4775 | info@sct-inc.com | www.sct-inc.com

SCTi
STRATEGIC CLEAN TECHNOLOGY

SCTi
STRATEGIC CLEAN TECHNOLOGY

CASE STUDY

FLOATING HEAD RETROFIT



SITE OVERVIEW

A mid-sized data center, approximately 5,000 sq. ft with an IT load of 436kW. Cooling is supplied by 11 Liebert CRAC units.

CLIENT PAIN POINTS

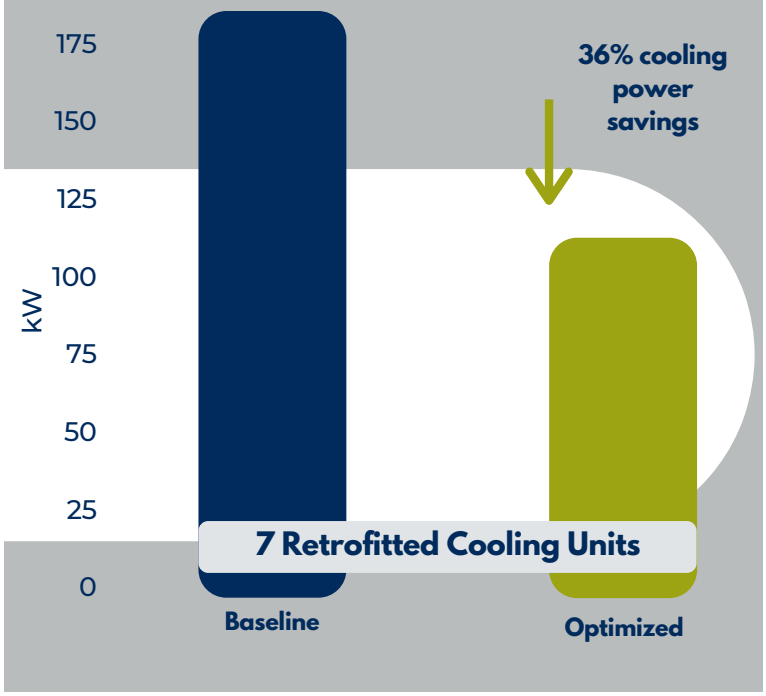
- Frequent CRAC repairs required
- High operational costs
- Insufficient site cooling capacity
- Hotspots and airflow issues

EXECUTION

- Full site audit, CFD & technical & financial feasibility analysis
- Floating head retrofit on seven CRAC units
- CRAC networking & sequencing

PROJECT PERFORMANCE

POWER USE



BUSINESS CASE

Annual Cooling Energy - kWh	1,558,693
Annual Energy Savings - kWh	567,351
Annual Cost Savings	$79,429
Project Cost	$221,110
Incentive	-$56,735
Net Project Cost	$164,375
Energy Savings	36%
Payback (Years)	2.1

END USER BENEFITS

- 36% reduction in cooling energy
- Energy incentive covered 25% of project costs
- Increase CRAC Cooling Capacity
- Increased unit efficiency and reduced wear and tear
- Carbon footprint reduction of 353 kg of refrigerant, equivalent to 626 tonnes of CO2

1-866-831-4775 | info@sct-inc.com | www.sct-inc.com

SCTi
STRATEGIC CLEAN TECHNOLOGY

FLOATING HEAD RETROFIT

Frequently Asked Questions

How much will I save from the retrofit?

Energy savings from the retrofit can be as high as 45%. For example, if a CRAC unit is consuming 30kW of power, it will cost $39,420 to operate it annually. A conservative 35% savings will help save $13,797 annually, providing a ROI of 1.5 years.

Do I need specially trained HVAC Technicians to service the retrofitted units?

No, you do not! No significant changes are made. A new micro-processor controller is added which will assist your current technicians to diagnose problems. Training is also provided to the technicians so they are aware of all changes made.

What changes are made to the CRAC unit?

The retrofit includes upgrading an electronic expansion valve with a micro-processor based controller, and a VSD lead condenser fan. These components are commonly used in today's modern cooling units that already float the head pressure.

How will my data center be affected during the retrofit work period?

Generally, one CRAC unit is retrofitted at a time and will take 4-5 days to complete. Prior to initiating any work, SCTi will work with you to ensure your data center can operate normally during the retrofit period. The cooling capacity will be determined if temporary cooling is required.

Is the retrofit work warranted?

Yes! A one-year parts and labor warranty is included as part of the retrofit agreement.

Are incentives available for this retrofit?

Yes! Incentives are available for this retrofit. **Energy incentives can cover up to 50% of the project costs.** In many cases, SCTi can act as your application representative and help expedite the application submission.

1-866-831-4775 | info@sct-inc.com | www.sct-inc.com

SCTi
STRATEGIC CLEAN TECHNOLOGY

THE ONLY DATA CENTER COOLING SPECIALISTS WHO CONSULT AND DELIVER TURNKEY SOLUTIONS FOR LEGACY CRITICAL FACILITIES.

We enable companies to be better environmental stewards by reducing data center cooling energy consumption and greenhouse gases.

COOLING OPTIMIZATION

means using the least amount of cooling capacity and the least amount of energy to drive cooling to create optimal thermal conditions for the IT equipment.

- **AIRFLOW OPTIMIZATION**
- **REDUCE HOTSPOTS**
- **RIGHT SIZING COOLING**
- **INCREASE COOLING CAPACITY**
- **REDUCE OPEX, DEFER CAPEX**
- **VERIFIABLE ENERGY REDUCTION**

SERVICES

with measurable results!

- data center cooling optimization
- cooling energy efficiency audit
- energy conservation measures
- critical facility airflow modelling
- critical facility design consultation
- best practice training
- incentive program management
- OPEX efficiency program

7,843,801 kWh
reduction in clients' cooling energy use

$1,098,132
reduction in clients' cooling energy costs

$795,968
energy incentive payments recieved by clients

CALL NOW

1-866-831-4775

info@sct-inc.com
www.sct-inc.com

SCTi
STRATEGIC CLEAN TECHNOLOGY