



Unlocking Efficiency, Enablement, and Savings Next Generation Data Center Cooling Across Global Climates



Case study data:

Advanced cooling technologies in data centers can generate up to¹



17%

lower energy
consumption²



88%

reduction in
facility-related
operational costs²



16%

reductions in
capital expenditure²



40%

lower Total Cost
of Ownership²

In the era of AI and high-performance computing, data centers face escalating challenges in managing energy, water, and space while effectively cooling powerful processing units.

Unlocking Efficiency, Enablement, and Savings: a case study report explores how next generation liquid cooling technologies are changing the industry, providing optimal solutions for cost, efficiency, and environmental impact.

The Report Reveals

Two-Phase Immersion Cooling (2-PIC) can deliver up to 40% lower Total Cost of Ownership (TOC) 2-PIC significantly outperforms DTC-chiller systems, with 15% lower PUE and 84% lower OPEX.

Operational Cost Savings

2-PIC significantly reduces operational expenditures (OPEX) compared to other cooling methods, with savings ranging from 54% to an impressive 88.6%.

Power Usage Effectiveness (PUE)

2-PIC boasts the lowest PUE, showcasing its superior energy efficiency, with reductions ranging from 7% to 17% compared to other technologies.

Future-Proof Scalability

2-PIC maintains its performance even with increasing IT loads, ensuring long-term cost-effectiveness and adaptability to future demands.

Efficiency Across Climates

2-PIC excels in all climates, operating efficiently without chillers in cooler regions and minimizing water usage in warmer areas.



Denmark: 2-PIC significantly outperforms DTC-chiller systems, with 15% lower PUE and 84% lower OPEX.²



Virginia, US: 2-PIC excels with 12% lower PUE than 1-PIC-chiller and an impressive 83% lower OPEX than DTC-chiller systems.²



Singapore: 2-PIC showcases superior efficiency with up to 17% lower PUE and a remarkable 88.6% lower OPEX compared to DTC-chiller systems.²



Abu Dhabi: 2-PIC demonstrates 12% lower PUE than DTC-chiller and a substantial 54% reduction in OPEX compared to both 1-PIC and DTC-chiller systems.²

Actionable Insights

This report provides a clear roadmap for navigating these challenges, highlighting how 2-PIC can be a game-changer for data centers seeking efficiency, cost savings, and a greener future.

Learn how to take the first steps to gain a competitive edge in the rapidly evolving world of data center technology.

Scan the QR code to read the **Unlocking Efficiency, Enablement, and Savings** report.



References

¹ When compared to single phase immersion and single phase direct to chip.

² Analysis results in 4 global locations; US, UAE, Denmark and Singapore from the study *Comparison of Server Liquid-Cooling Technologies*, Syska Hennessy Group, Inc.