



Delivering unrivalled chilled water system visibility for a shopping mall operator

optimisation solutions by:



Solution: Energy optimization of chilled water plant

Where:
Bangkok, Thailand

Total Gross Area:
21,906m²

Financial savings per year:
USD76,000

CO² reduction per year:
20,000 kg per month

Target Efficiency achieved:
0.78 kW/RT

28% annual savings



The bbp optimisation solution provided **real-time insight** into equipment performance, enabling predictive maintenance and significant cost savings

The Situation

As a large shopping mall in the busy city of Bangkok, Center One delivers a large cooling load daily. In the interest of reducing its cooling bill and reducing its environmental impact, its chilled water system was earmarked as a key area for improvement.

The Solution

Through high precision sensors, flow and power meters, data on the energy consumption and energy efficiency of all equipment within Center One's chilled water system is continually collected and made available on a remote dashboard. Using the data collected, bbp's intelligent algorithm makes automatic adjustments to equipment settings, achieving system balance and thereby maximising energy efficiency.

The bbp solution generated significant cost savings for Center One which could be channelled to improve other areas of their plant, while reducing reliance on their technical and maintenance teams.

The Outcome

Ultimately, the bbp solution's benefits to Center One have gone far beyond energy and financial savings alone. By functioning as a central repository for data on equipment and the system as a whole, the dashboard has become a vital reference point for the client. It has enabled them to:

- Monitor performance of equipment in real-time
- Detect when equipment needs servicing and formulate a predictive maintenance plan
- Avoid equipment breakdown and therefore reduce overall maintenance cost
- Establish the relationship between equipment settings and metrics such as system energy efficiency and delivered cooling

At the end of the day, having access to this degree of oversight has not only improved immediate outcomes such as cost and efficiency. It has improved the knowledge and capabilities of Center One's team, empowering them to develop strategies that deliver long-term benefit to their system and reduce their impact on the environment.

The bbp energy optimization solution allows us to closely monitor each piece of equipment in our chilled water system. It provides us with visibility of its energy consumption, pumping level, pressure value, flow value and much more. This means that if there are any abnormalities, we know and can take corrective actions immediately."

- Pumpath Sukkharatnawachot, Centre One Building Manager