Case Study

Residential Highrise

Background

OUC District Cooling offers centralized chilled water solutions for a wide range of comfort cooling applications as an efficient and sustainable alternative to traditional building owned air conditioning systems. By connecting to OUC District Cooling, building owners and managers may avoid the capital expenditures and the operational complexities associated with maintaining on-site cooling equipment.

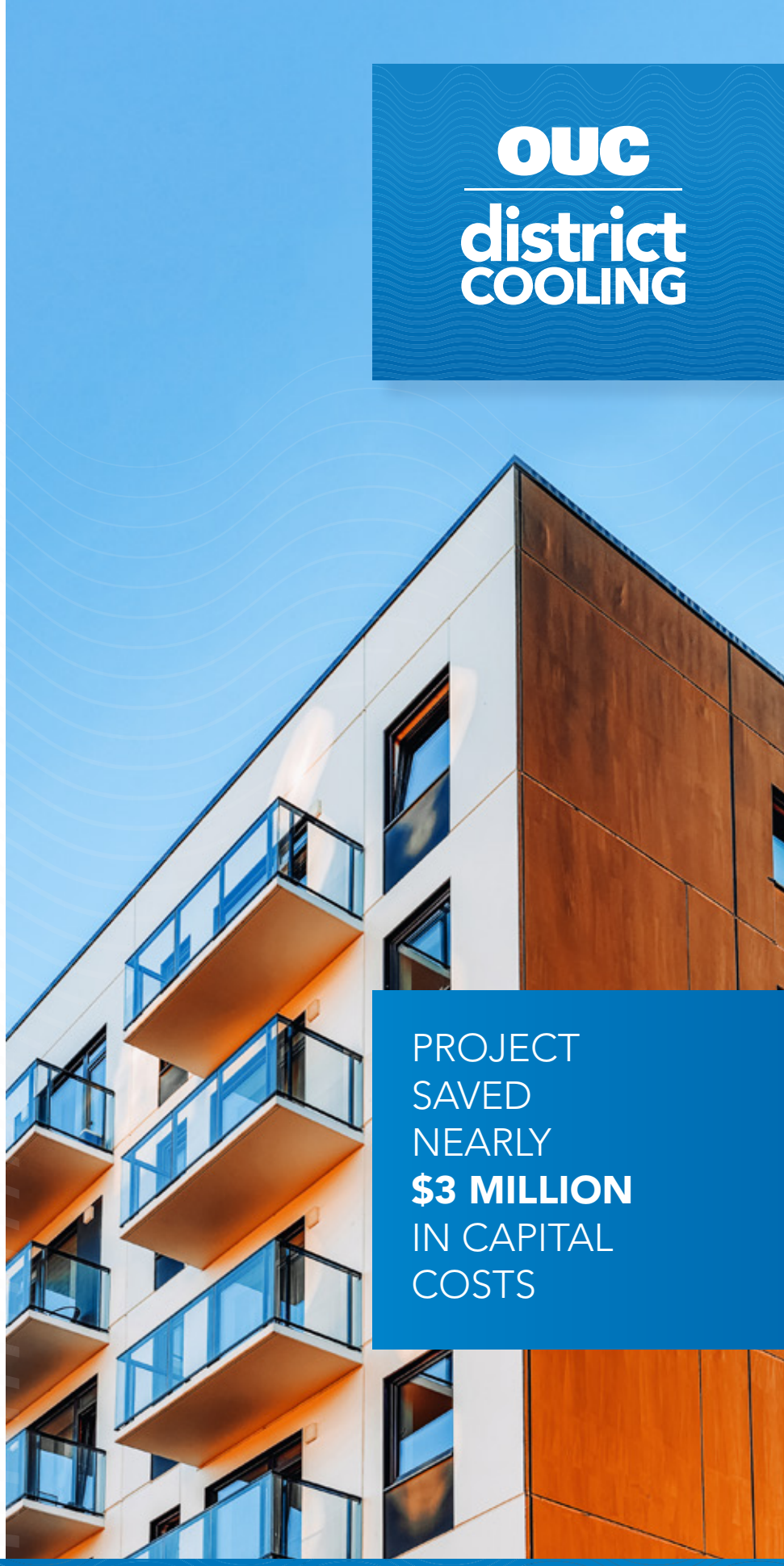
A residential high-rise in Downtown Orlando utilized OUC District Cooling to address the unique challenges posed by its campus layout and operational needs.

Challenge

The developers of a more recently constructed residential high-rise complex faced significant obstacles in designing a cooling system for their residential campus. The layout, which included a tower and an adjacent retail facility, created mechanical infrastructure challenges.

They were presented with two options: install two separate cooling systems to serve each facility individually or invest in a single, large system to serve both. Either mechanical system option would have required a tremendous capital investment, estimated upwards of $3 million at the time of the facility's construction.

OUC district COOLING



PROJECT SAVED NEARLY **$3 MILLION** IN CAPITAL COSTS

Solution

To overcome the infrastructure and financial challenges, the developers opted to connect the residential high-rise complex to OUC's Downtown District Cooling system. This decision eliminated the need for a $3 million capital investment for on-site cooling equipment.

OUC's centralized chilled water system provided very high reliability through its looped district design, ensuring uninterrupted service and operational flexibility. The ability to sub-meter usage allowed for a tenant-based billing solution which aggregated month charges are deducted from the overall building consumption with the allocated to the common areas.

By outsourcing cooling needs to OUC, the developers significantly reduced the need for on-site facilities staff and minimized maintenance responsibilities.

Implementation

From the project's inception, OUC worked closely with the developers to integrate District Cooling into the high-rise complex. The connection process, which took place between 2004 and 2005, involved linking the buildings to OUC's chilled water main lines located beneath the streets of Downtown Orlando. The seamless integration ensured that the complex could immediately benefit from the advantages of OUC's district cooling system.

Results

The decision to utilize OUC District Cooling delivered substantial benefits for the residential high-rise complex. By avoiding the need to install and maintain traditional on-site cooling systems, the developers saved approximately $3 million in initial capital costs. The centralized system also reduced operational complexity, requiring fewer facilities staff while ensuring a highly reliable and consistent service.

OUC's looped district design provided the flexibility to meet the complex's varied cooling demands without compromising performance or efficiency. The ability to sub-meter tenant usage allowed for transparent and equitable billing, aligning with the needs of the residential tenants and building owners and operators. Nearly two decades after its implementation, the complex continues to benefit from the reliability, efficiency, and resiliency of OUC District Cooling.

Learn more about
OUC District Cooling